

REDUCING THE COST OF FOOD DISTRIBUTION

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CONTENTS

PART I—MORE EFFICIENT DISTRIBUTION AND CONSERVATION OF FOODSTUFFS

	Page
CAR-LOT MARKETS AND HOW THEY ARE SUPPLIED.....	1
Frank Andrews, United States Department of Agriculture	
THE PLACE OF THE INTERSTATE RAILROAD IN REDUCING FOOD DISTRIBUTION COSTS.....	10
Ivy L. Lee, Executive Assistant, Pennsylvania Railroad Company	
THE MOTOR TRUCK AS AN AGENCY IN DIRECT MARKETING.....	20
Stanley Albin Phillips, Technical Editor of <i>The Power Wagon</i> , Chi- cago	
IMPROVED PUBLIC HIGHWAYS.....	35
James M. Cox, Governor of Ohio	
WHAT FARMERS CAN DO TO FACILITATE THE TRANSPORTA- TION AND MARKETING OF PRODUCE.....	37
F. R. Stevens, Agriculturist, Lehigh Valley Railroad Company	
SOME ASPECTS OF FOOD CONSERVATION BY REFRIGERATION.....	44
Frank A. Horne, President of the Merchants Refrigerating Com- pany, New York, and Chairman of the Commission on Legislation of the American Association of Refrigeration	
PREVENTION OF WASTE AND SEASONAL PRICE FLUCTUA- TIONS THROUGH REFRIGERATION	48
George K. Holmes, United States Department of Agriculture	

PART II—LOWER COSTS THROUGH THE MIDDLEMEN AND RETAILING

RELATION OF JOBBERS AND COMMISSION MEN TO THE HANDLING OF PRODUCE.....	57
C. W. Thompson, Investigator, Rural Organization Service, United States Department of Agriculture	
WHOLESALE CITY DISTRIBUTION OF FARM PRODUCTS.....	69 ✓
Frank G. Urner, Editor, <i>New York Produce Review</i>	
THE COST OF DISTRIBUTING GROCERIES.....	74
E. M. Patterson, Ph.D., Wharton School of Finance and Commerce, University of Pennsylvania	

PUBLICITY AS A PREVENTIVE OF ABUSES BY THE RETAILER	83
Martha J. Fuller, Chairman, Committee on Advertising, <i>Housewives League Magazine</i> , New York	
EFFECT OF THE NEW JERSEY DEPARTMENT OF WEIGHTS AND MEASURES ON THE COST OF LIVING.....	86
William L. Waldron, Superintendent, Department of Weights and Measures, Trenton, N. J.	
SAVINGS THROUGH PROPER SUPERVISION OF WEIGHTS, MEASURES AND STANDARDS.....	94
Fritz Reichmann, Ph.D., Superintendent of Weights and Measures of the State of New York	
PART III—LOWER COSTS THROUGH MUNICIPAL MARKETS AND DIRECT MARKETING	
✓ MUNICIPAL MARKETS.....	102
Clyde Lyndon King, Ph.D., Wharton School of Finance and Commerce, University of Pennsylvania	
SOME TYPICAL AMERICAN MARKETS—A SYMPOSIUM	
I PURPOSE OF THE SYMPOSIUM.....	118
Clyde Lyndon King, Ph.D.	
II BALTIMORE'S MARKETS.....	119
James F. Thrift, Comptroller, and William T. Childs, Deputy Comptroller, Department of Finance, Baltimore, Md.	
III MUNICIPAL MARKETS IN CLEVELAND.....	128
Charles Kamp, Market Master, Cleveland, Ohio	
IV THE INDIANAPOLIS MARKET.....	131
Annis Burk, Secretary to the Mayor, Indianapolis, Ind.	
V THE MILWAUKEE MUNICIPAL MARKET.....	132
Leo Tiefenthaler, Municipal Reference Librarian, Milwaukee, Wis.	
VI MUNICIPAL MARKETS IN PHILADELPHIA.....	134
Achsah Lippincott, Clerk of the Markets, Philadelphia	
VII THE ROCHESTER PUBLIC MARKET.....	137
E. W. Merrill, Market Master, Rochester, N. Y.	
A QUESTIONNAIRE ON MARKETS.....	139
John W. Farley, Chairman of Committee on Investigation of Municipal Markets, Memphis, Tenn.	
WHOLESALE TERMINAL MARKETS IN GERMANY AND THEIR EFFECT ON FOOD COSTS AND CONSERVATION.....	153
Stadtrat D. Levin, Member of the Magistrate, Frankfurt, Germany	

CONTENTS

v

33	THE LONG ISLAND HOME HAMPER.....	166
	H. B. Fullerton, Director, Agricultural Development, Long Island Railroad Company, Medford, Long Island	
86	THE COMBINATION FAMILY BASKET.....	171
	Harry Sprackland, Barrington, N. J.	

PART IV.—LOWER COSTS THROUGH FARM CREDITS AND ADVERTISING

94	PROFITS THAT FARMERS RECEIVE.....	175
	E. H. Thomson, Agriculturist, Bureau of Plant Industry, United States Department of Agriculture	
D	EFFECT OF FARM CREDITS ON INCREASING AGRICULTURAL PRODUCTION AND FARM EFFICIENCY.....	183
	Homer C. Price, Dean, College of Agriculture, Ohio State Univer- sity, Columbus, Ohio	
02	FARM CREDITS THROUGH FARMERS' LOAN ASSOCIATIONS....	191
	Isaac Roberts, Author of <i>Looking Forward</i> , Philadelphia	
18	ADVERTISING AS AN AID TO DIRECT SELLING.....	197
	J. Clyde Marquis, Associate Editor, <i>The Country Gentleman</i> , Phila- delphia	

PART V.—LOWER COSTS THROUGH COÖPERATION

128	GRAIN GROWERS REDUCE COST OF DISTRIBUTION.....	203
	W. M. Stickney, of Lowell Hoit & Company, Members of Chicago Board of Trade	
131	THE MONMOUTH COUNTY FARMERS' EXCHANGE.....	211
132	Joseph H. Willits, Department of Industry, University of Penn- sylvania	
134	THE COÖPERATIVE LAMB CLUB AS AN AGENCY FOR LOWER MARKETING COSTS.....	216
137	D. H. Doane, Professor of Farm Management, University of Mis- souri, Columbia, Mo.	
139	THE CONSUMERS' COÖPERATIVE MOVEMENT IN CHICAGO....	223
	W. M. Stickney, Chairman Local Board U. S. Coöperative Com- pany, Chicago	
153	WHAT COÖPERATIVE SOCIETIES MAY ACCOMPLISH IN LOW- ERING FOOD DISTRIBUTION COSTS.....	229
	E. M. Tousley, Editor of <i>Coöperation</i> , and Secretary, Right Relation- ship League, Minneapolis, Minn.	

PART VI—ELEMENTS IN A CONSTRUCTIVE PROGRAM FOR LOWER DISTRIBUTION COSTS

CITY PLANNING AND DISTRIBUTION COSTS.....	240
F. Van Z. Lane, Civil Engineer and Traffic Expert and John Nolen, Landscape Architect and City Planner	
✓ CONSTRUCTIVE PROGRAM FOR REDUCTION OF COST OF FOOD DISTRIBUTION IN LARGE CITIES.....	247
Thomas J. Libbin, New York City	
THE OFFICE OF MARKETS OF THE UNITED STATES DEPART- MENT OF AGRICULTURE.....	252
Charles J. Brand, Chief	
BOOK DEPARTMENT.....	261
INDEX.....	295

BOOK DEPARTMENT

NOTES

AMERICAN SOCIOLOGICAL SOCIETY—*Papers and Proceedings of the Seventh Annual Meeting* (1912) (p. 261); d'ANETHAN—*Fourteen Years of Diplomatic Life in Japan* (p. 261); ASHLEY—*The Social Policy of Bismarck* (p. 261); ASHLEY—*Gold and Prices* (p. 262); BLAKESLEE—*Japan and Japanese-American Relations* (p. 262); BOSTWICK—*The Different West* (p. 262); BRYCE—*University and Historical Addresses* (p. 262); BUREAU OF MUNICIPAL RESEARCH—*Handbook of Municipal Accounting* (p. 263); COUDERT—*Certainty and Justice* (p. 263); FERRER—*The Origin and Ideal of the Modern School* (p. 264); GILL AND PINCHOT—*The Country Church* (p. 264); HASKIN—*The Immigrant: An Asset and a Liability* (p. 264); JAMES—*Principles of Prussian Administration* (p. 265); KLEIN—*Elements of Accounting* (p. 266); LEE—*Crowds* (p. 266); MACFARLANE—*Manufacturing in Philadelphia, 1683-1912* (p. 266); MARTIN—*The Unrest of Women* (p. 267); MYRICK—*Coöperative Finance* (p. 267); NYSTROM-HAMILTON—*Ellen Key, Her Life and Her Work* (p. 267); PATTISON—*Leading Figures in European History* (p. 267); RACINE—*Accounting Principles* (p. 268); ROBERTS—*Looking Forward* (p. 268); ROOT—*Experiments in Government and the Essentials of the Constitution* (p. 268); VAN ANTWERP—*The Stock Exchange from Within* (p. 268); VAN KLEECK—*Artificial Flower Makers* (p. 269); WINDER—*The Public Feeding of Elementary School Children* (p. 269).

REVIEWS

BLOUNT—*The American Occupation of the Philippines* (p. 269). E. W. Kemmerer
Catholic Encyclopedia (vol. xv) (p. 271)..... A. C. Howland
 COPELAND—*The Cotton Manufacturing Industry of the United States*
 (vol viii) (p. 272)..... A. G. White

FAIRCHILD— <i>Immigration</i> (p. 273).....	Kate H. Claghorn
FULLER— <i>The Empire of India</i> (p. 273).....	C. L. Jones
GIBBON— <i>Medical Benefit in Germany and Denmark</i> (p. 274).....	E. H. Lewinski-Corwin
HEISLER— <i>Federal Incorporation</i> (p. 275).....	J. T. Young
HIGGINS— <i>War and the Private Citizen</i> (p. 276).....	E. C. Stowell
HOBSON— <i>Gold, Prices and Wages</i> (p. 278).....	E. M. Patterson
HOWE— <i>European Cities at Work</i> (p. 279).....	C. L. King
KEITH— <i>Responsible Government in the Dominions</i> (3 vols.) (p. 280).....	C. G. Haines
KOESTER— <i>The Price of Inefficiency</i> (p. 282).....	M. S. Howard
LE BON— <i>The Psychology of Revolution</i> (p. 282).....	J. P. Lichtenberger
MOORE— <i>The Supreme Court and Unconstitutional Legislation</i> (p. 283).....	C. H. Maxson
PARMELEE— <i>The Science of Human Behavior</i> (p. 285).....	J. P. Lichtenberger
POWELL— <i>Coöperation in Agriculture</i> (p. 286).....	A. P. Winston
SCOTT— <i>A Free Farmer in a Free State</i> (p. 287).....	A. P. Winston
SLATER— <i>The Making of Modern England; Hayes—British Social Politics</i> (p. 287).....	A. Fleisher
SMITH— <i>Social Idealism and Changing Theology; MACFARLAND (Ed)— Christian Unity at Work; and Report of Proceedings of the Sec- ond Quadrennial Council of the Federal Council of the Churches of Christ in America</i> (p. 288).....	G. S. White
TODD— <i>The Primitive Family as an Educational Agency</i> (p. 289).....	J. P. Lichtenberger
TRIDON— <i>The New Unionism</i> (p. 290).....	A. Fleisher
WARNE— <i>The Immigrant Invasion; HOURWICH—Immi- gration and Labor</i> (p. 290).....	J. P. Lichtenberger
WITHERS— <i>Money Changing</i> (p. 292).....	E. M. Patterson
WOODS— <i>The Influence of Monarchs</i> (p. 293).....	S. Nearing

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CAR-LOT MARKETS AND HOW THEY ARE SUPPLIED

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Raw materials for use in manufacturing naturally tend to move to market in car-lots. Wheat and cotton regularly go to the mills and live stock to the packing houses in wholesale quantities; for the miller, the spinner, and the packer are essentially car-lot buyers. So for other raw materials, the usual unit of shipment has long been the carload. In regard to another class of commodities, those ready for immediate household consumption, the carload has been, to some extent, adapted to market conditions. A product that can be kept for a few weeks, at least, awaiting consumption, may be received one or more carloads at a time and stored until absorbed by the retail trade. This is true of such articles as potatoes, cranberries, apples, eggs, butter and fresh meats. When a carload of one of these commodities reaches a market where, for instance, a week's demand will not take more than one-half a car, the balance may be held in storage without serious loss until sold. Such commodities of relatively good keeping qualities do not require such a highly developed car-lot marketing system as do more highly perishable articles. An excess of supply over demand in one market may be relieved by storage or by reshipment to another market, for the less perishable commodities.

The marketing of highly perishable articles gives rise to special problems. Strawberries, for instance, can not be kept many days awaiting consumption; even cold storage does relatively little to relieve a glutted market. An over-supply in a given city of such things as berries, peaches, cantaloupes, and tomatoes regularly causes low prices, if not loss through decay. Many of these highly perishable fruits and vegetables are shipped in car-lots, and special features in distribution have been developed to meet the peculiar needs of this trade.

Consumption Zones

The market capable of disposing of a carload of such produce is called in this article a "car-lot market." The consumption at such a place includes the retail trade within wagon haul of the wholesale

produce warerooms and also outlying towns and cities to which small shipments may be made profitably. The radius of such a zone of consumption for a given article depends partly upon its relative value compared with the less-than-carload freight charge, partly upon the character of the transportation service, and partly upon the encroachment of the consumption zones of other car-lot markets. Local refrigerator-car services are maintained between some large cities and points in the surrounding country for the purpose of distributing and of collecting small consignments of perishable articles. An illustration of this service is afforded by a recent schedule of the Chicago and Northwestern Railway. One refrigerator-car train of this road was scheduled to leave Chicago every night, except Sunday, at 9.45, and consisted of cars for fourteen different routes. From this train, cars were transferred to other routes or left for local use at the following points in Iowa: one car was taken off at Cedar Rapids, another at Marshalltown, still another at Ames, a fourth at Tama, while at Eagle Grove three cars were detached and transferred to three different trains; at Belle Plaine two more trains were each given a car, and at Mason City still another car was taken off. This procedure was reversed on the return trip of this train, refrigerator cars being collected at various points and taken to Chicago.

For many car-lot markets, ordinary local freight service moves the parcels out to neighboring towns, especially to those within a day's haul.

Supplementing the steam roads in distributing this produce from car-lot markets are boat lines and interurban electric roads. Cincinnati is an example of a car-lot market well served in this trade by all three kinds of transportation—steam railroads, boats and trolley lines.

The receivers at car-lot markets include commission merchants, jobbers and agents of shippers. Some of these agents represent mercantile concerns and others represent farmers' coöperative associations. One function they have in common is to receive the car load, possibly sort and repack its contents, divide it, then sell it to jobbers, retailers, or any others who will buy in wholesale quantities. In some cities this produce is sold at freight terminals, where the cars are unloaded. Such a market place is in New York on certain piers along North River. Here the loaded cars are delivered by car-float from the opposite shore, and the contents are unloaded and exposed for sale.

The jobbers, retail merchants, push cart men, and other buyers at this market place haul their purchases away, thus saving any haul from pier to wholesale commission store.

Market Places

Another public market place for car-lot shipments is the auction room. Some of these are located at freight terminals and others are nearer the produce commission houses than the freight terminals. One auction room in New York is on one of the Erie Railroad piers, while another is a few blocks back from the river, in the midst of the produce district in the neighborhood of Washington Market.

The typical market place for fruits and vegetables is the "produce district" found in practically all cities important enough to be classed as car-lot markets. These localities consist of groups of wholesale produce stores and are often located within convenient distance of some freight terminal. In the older cities, which have had considerable water trade, produce commission houses are apt to be grouped near the wharves. Some such business sections, as Third street in St. Louis, Pratt street in Baltimore, Walnut street in Cincinnati, Dock street in Philadelphia, and South Water street in Chicago, are located near the wharves and landings over which fruits and vegetables were received from boats generally long before the railroads developed their modern fast-freight services. Other produce districts are near railroad freight terminals, as Chestnut street district, near 32d, in Philadelphia, Penn avenue in Pittsburg, and Delaware street in Indianapolis; while still other groups of produce stores are near some public retail market, as is the case with parts of Louisiana avenue and B street in Washington, and the West Sixth street produce district of Cincinnati.

Practically every city in the United States, of 25,000 population or more, and possibly many smaller ones, can consume within a few days a carload of one or more kinds of highly perishable fruits or vegetables. According to the report of one of the large merchant shippers of Jacksonville, Florida, in 1912 car-lot shipments of Florida produce were made to 210 different cities, located in 46 states. This number includes most all the cities of this country having a population of at least 25,000. In response to an inquiry made by the writer, under the authority of the United States Department of Agriculture,

in 1910, reports as to car-lot receipts were made by freight officials and by merchants in 103 cities. Of these, 87 were mentioned as car-lot markets for peaches, 86 for watermelons, 77 for cantaloupes, 71 for strawberries, 66 for tomatoes, 53 for grapes, 13 for cherries, 11 for cucumbers, 11 for green beans, 11 for apricots, and each of about 25 other commodities of this class was reported to have car-lot markets in from 1 to 10 different cities. These figures are probably incomplete, even for the 103 cities represented; hence, the total number of car-lot markets for each of the products just mentioned was possibly double the figures quoted.

In this inquiry an attempt was made to determine approximately a rate of increase for car-lot traffic in highly perishable fruits and vegetables. Figures based upon reports from 42 cities indicated an average increase of 40 per cent from 1900 to 1910 in the number of car-lot markets for this kind of produce.

Sources of Supply

The sources of supply for these large centers of consumption may be divided roughly into two classes: the region within wagon-haul or within a radius not too great for the economical shipment of less-than-carload quantities; and, second, the regions beyond such radius. To these two may be added, for many cities, a third class of regions of supply consisting of places connected with the market by water transportation. This third class differs from the first in that it often includes places of production much farther from market, and also from the second class in that the former embraces territory which is less subject, if at all, to the limitations of "car-lot" traffic, although it shares in certain of its advantages. A boat can carry one crate of produce as quickly and efficiently as a carload, and the freight rate by boat, especially over some of the principal fruit and vegetable routes along the Atlantic coast, is often not much higher for a small than for a large consignment.

Illustrations of the wide range of sources of supply of certain products at large markets are afforded by price quotations. New York City's strawberries in the spring and early summer of 1912 were brought from various regions along the Atlantic coast, extending from Florida to New York state, inclusive; and late in the fall California contributed strawberries to this market. Cantaloupes from Cali-

ifornia, Virginia and Georgia were quoted in this city on the same day, while Colorado, New Jersey, Delaware and Maryland were also among the states sending cantaloupes to this market. Kansas City's lettuce supply in 1912 was taken from nearby fields, also from California, Florida, New York, Louisiana, Colorado, Texas and Arkansas, and no doubt from other states not mentioned in the price quotations.

The sources of supply of a given market for a given commodity depend partly upon variations in quantities marketed from season to season. For instance, Georgia competes with Arkansas in certain markets in the sale of peaches; with a plentiful Georgia crop and a small crop in Arkansas, the Georgia peaches would get into markets farther west than if the Arkansas crop were large enough to supply those western cities.

Not only is the supply of perishable fruits and vegetables for a large city drawn over a much larger radius than formerly, but it is also drawn for a much longer period each year. The strawberry season for many cities begins not later than the first part of November and extends until late the next July. String beans, tomatoes and lettuce are "in season" practically throughout the year. The cantaloupe season has been lengthened until now it extends over five months of the year in some markets. And so on with a considerable list of highly perishable fruits and vegetables; the so-called "seasons" have been lengthened, and the consumer has a larger range in the choice of his food supplies, especially during that part of the year when "home grown" produce is scarce.

Moreover, a crop failure in one or, at most, a few localities does not have such a marked effect upon prices or supplies in a given city, as was the case before the development of the present wide system of distribution.

Necessity for Car-Lot Shipments

The bulk of the long-distance movement of these perishable articles goes in car-lots. The necessity for quick dispatch forbids the delays occasioned by transferring freight from one car to another; the carload is therefore the unit required by conditions of quick service. These carloads, all consisting of similar kinds of perishable freight, are readily separated from other kinds of commodities and given such service as is peculiarly adapted to their needs. Some features of this fast freight service are of public interest.

Car-lot shipments of this perishable produce are required also over many routes by the difference in freight rates on carloads as compared with smaller lots. For instance, the rate on peaches from Fayetteville, Arkansas, to Omaha, Nebraska, in November, 1912, was 51 cents per 100 pounds, while on less-than-carload lots the rate was 99 cents per 100 pounds. At the same time, the carload rate on celery from Sanford, Florida, to Boston, Massachusetts, was 41 cents per crate, if in ventilator cars (minimum carload of 420 crates), while the less-than-carload rate was 51 cents. If in refrigerator cars, the minimum load being 350 crates, the rate was 47 cents per crate.

Another thing that makes the carload the best unit for long distance shipments is the fact that much of this produce has to be moved under refrigeration and it is difficult, if not impracticable, to refrigerate small quantities over long routes.

How Small Lots are Combined

Many a farmer does not produce enough of a commodity to make a carload for a single shipment, yet he ships to a distant market under conditions requiring the unit of marketing to be the carload. To accomplish this, it is necessary to combine the contributions of a number of growers. This is sometimes done through a system of concentrating into carloads, at some "transfer platform," the small lots collected at various neighboring stations. One such "pick up" system, under the direct management of the railroad companies concerned, is credited with giving considerable help to truck-growing in regions along the Atlantic coast.

Another method of combining small shipments into carloads is that followed by one or more forwarding agents, whose headquarters are at Chicago, and who have their agents along various railroads, especially in the South. The consignor delivers to the forwarder's local agent, for instance, a few crates of peas consigned to a certain firm in Chicago; another shipper has a case of eggs for another Chicago dealer; a third shipper hands over to the forwarder's agent another package consigned, let it be assumed, to a third man; and so on through a list of possibly twenty to sixty or more separate consignments. All of these may be put into one car and consigned to the forwarder in Chicago, who pays the railroad company at carload rates. On the arrival of the car at destination, it is opened by the

forwarder and the separate consignments delivered to the respective consignees. For this forwarding service the charge to the shipper is said to be less than the less-than-carload rate charged by the railroads but somewhat more than the carload rate; the excess being intended to pay the forwarder for his services and risk.

The making up of carloads is one of the most important functions of those cooperative marketing associations that handle fruits and vegetables. The various small shipments of individual growers are thus readily combined into the larger units which are required by long-distance market conditions.

Special Features in Freight Service

To handle the traffic in perishable commodities as well as other freight requiring prompt dispatch, many railroads have instituted fast freight services. Trains in such a service are moved promptly and at relatively high rates of speed. Passing through territory where it is necessary to stop often to receive or transfer cars, one of these trains will make possibly sixteen or more miles per hour, including stops; and, when stopping seldom except at division terminals, the speed will average eighteen or more miles per hour. The actual speed while running is of course higher than the rates just quoted. These rates are approximately what are made on different parts of the routes between New Orleans and Chicago, also between Tampa and New York.

One of the most valuable features of these fast freight services is the method of reporting the progress of each car by wire, so that the consignee or shipper may learn the location of a given car at a given time and also the probable time of its arrival at a certain market. These "passing reports," in addition to telegraphic news of market conditions, make possible an elaborate system of distributing perishable fruits and vegetables among various markets according to their respective needs.

The Georgia Fruit Exchange, for instance, consigns six cars of peaches to Cincinnati, and while they are in transit the manager of the exchange learns that the movement of peaches to St. Louis is light and that two carloads will sell there at better prices than east of the Mississippi river. Accordingly orders are sent to Cincinnati to divert two cars to St. Louis; and, guided by other market news, the manager

orders one car to be delivered at Cincinnati, another sent to Indianapolis, another to Cleveland, and the sixth to Chicago. Again, an instance: suppose the California Fruit Distributors have three cars of cherries on the way to New York, all due there on the same day; but from advices received it seems probable that only one carload will sell in that city at remunerative prices. Consulting the passing reports, which this association maintains for itself, it is learned that the three cars have not yet reached Council Bluffs, Iowa. Accordingly, word is sent to that diversion point to divert two cars, one to go, for instance, to Pittsburgh and the other to St. Louis.

Passing reports, or rather reports made in advance of arrival, are sometimes given for boats also. The following quotations from the *Daily Fruit Report* of the Boston Fruit and Produce Exchange, for June 13, 1913, illustrates "passing reports" of both rail and water lines:

The Norfolk steamer *Howard* due to arrive here this morning at about 10.50 has 1,433 barrels of potatoes, 41 crates of cabbages, 1,730 baskets of beans, and 137 boxes of beets.

The Savannah steamer *City of Macon* due to arrive here late today has 5 barrels of potatoes and 4 crates of tomatoes.

The Norfolk train (D2) due to arrive here tomorrow (Saturday) has 200 barrels of potatoes and 150 baskets of beans.

The Norfolk train (D10) due to arrive here tomorrow (Saturday) has 400 barrels of potatoes and 25 baskets of beans.

Berries passing yesterday, due to arrive here tomorrow: 3 cars at Wilmington, Del.; 2 cars at Salisbury, Md.; 2 cars at Camden, N. J.; and 3 cars at Lakehurst, N. J.

The Savannah steamer *City of Memphis* due to arrive here Monday, June 16, has 97 crates of tomatoes.

Potatoes from Aroostook County, Me., passed Bangor 24 hours closing 8 o'clock this morning: 9 cars for Boston and 9 cars for other points.

Information like the above helps the Boston produce dealers to estimate in advance the daily supplies consigned to that market and to provide for their profitable distribution.

Market News

Each car-lot market is interested in reports similar to those just quoted. Wholesale dealers need to know how much of a given kind of perishable produce is on its way or may be diverted to their market. The regions and routes with which a dealer should keep in constant touch vary with commodities and with seasons. During the Florida

tomato movement, practically only one set of routes is to be watched for this vegetable—those routes leading out of Florida; and, among the dealers at car-lot markets, only those who handle tomatoes are vitally concerned with this part of market news. Later in the season it would be necessary to watch tomatoes "rolling" from a number of different places of production. And so, for other parts of current market news, each of a number of different interests is concerned with a special set of returns, which is to some degree independent of the rest of the news. Not only quantities in transit but also prices and demand at various points are items in these reports. The producer is concerned only with his own kind of commodity and those which may serve as substitutes for it. Many kinds of fruit are to some extent interchangeable in the household, and for commercial purposes are practically one commodity. The same is true of some vegetables. The information which the producer needs is confined generally to fewer commodities than the merchant would include in his set of items.

This news, to be of use, must be collected and given out promptly. Suppose ten cars of Georgia peaches are just reported as entering Potomac yards, Virginia, one of the chief diversion points. The manager of the marketing association which has shipped the cars, or his representative, needs to know at once the prices and prospective supplies in different cities that he may send orders to Potomac yards as to the final destination of each car. One day's delay in receiving this information may result in one or more cars being sent to a glutted market and the peaches sold at a loss. In the distribution of perishable fruits and vegetables it is necessary for much, if not most, of the effective market news to be disseminated by wire. Crop conditions, prospective shipments, and some general market conditions are reported in trade circulars and periodicals and have their use also, but the printing press and the mails are not quick enough for many of the most important items.

Two leading defects in this telegraphic news service are worthy of mention, defects recognized by producers and merchants, and intelligent steps are being taken to bring about an improvement. One of these faults is the occasional failure to report all important items relating to quantities about to be shipped or already on the way. A second defect in this quick news service is that there are many producers whom it does not yet reach. They have to select a market without proper information as to what it may offer; and many a shipment sent under such conditions is sold at a loss.

THE PLACE OF THE INTERSTATE RAILROAD IN REDUCING FOOD DISTRIBUTION COSTS

BY IVY L. LEE,

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More than in any other country, the freight rate system of the United States has been built up on the theory of minimizing the consideration of distance. The phrase "what the traffic will bear" has had to accept great abuse, so few realizing that the freight rate is not "all that the traffic will bear" but what will make the traffic move.

What freight rate will enable the oranges of California to compete in New York markets with those of Florida, two thousand miles nearer? How can the peaches of Georgia, the celery of Michigan, the beef from Chicago, be made to move freely to every market where such articles are consumed, so efficiently that they will be there when needed, so cheaply that practically all markets will be upon a price parity, and the producers will obtain an adequate return for their effort?

Man must not only be fed—he must be warmed, and mills must run. Shall the coal for the furnaces and the mills be charged the same freight rate as the cantaloupes for the table? If so, few could afford to buy coal, little coal would be transported, and the cantaloupes would have to pay even more. What the railroad traffic manager has had to do, therefore, has been to build up, step by step, meeting conditions as they arose, a scheme of freight rates which would enable the railroad to pay its expenses and a reasonable return upon the capital invested, out of an average freight rate, adjusted in such manner that the burden would bear where it would be least felt.

The commercial fabric of this country has been built up on this theory. Our railroads have been pioneers—heralds of civilization. The tremendous distances, the diversity of products, the wide separation of markets, have resulted in the development of a system of freight rates which, with all of its shortcomings, is the wonder of the economic world. To express the American railroad situation in a nutshell: American railways do their work upon less capital per mile; they

do more work per unit of capital; they pay their labor better; they pay more to the support of the government in proportion to the capital invested; and they do their work cheaper than is done in any other country in the world.

These preliminary observations are not intended as a gratuitous panegyric upon our railroads, but are a necessary basis for discussing the very practical problem indicated in the title of this article. For it must be understood at the very outset that it is the obligation of a carrier to supply transportation for every product that enters into commerce, at the same time providing safe and expeditious movement for passengers. The distribution of food, therefore, is but part of that greater problem of distribution in general, which is indeed the problem of our age. It is essential, in considering the part the railroad plays in food distribution, that it be understood how far the railroads of the country have already gone in the solution of the broader problem.

It is essential, too, that we realize some of the limitations that surround the carrier in the performance of his task. His business is solely to furnish transportation. He cannot act as banker, supplying money on goods to the shipper, while they are in transit. He cannot act as market agent, assuming responsibility for obtaining satisfactory prices in the best markets. He cannot supply a warehouse for storing goods while they await a purchaser. Nor can he grant special privileges to favored shippers, or communities. All must be treated alike, and the railroad cannot, under the law, interest itself in the reduction of food costs any more than in the reduction of the cost of iron ore or wood pulp. Circumscribed by such limitations, the railway manager, appreciating the vital importance of the distribution of food, has addressed himself to this problem with astonishing success.

The districts surrounding our large cities do not produce enough fruit or vegetables to supply their own needs, and were it not for fast freight trains, only the rich could afford to buy the season's perishable delicacies in the cities. Families in the North which formerly had to do without vegetables until late spring or summer can now afford new potatoes and peas brought from the South in February, and all on account of the facilities for rapid hauling and the low freight rates.

Necessity for quick transportation grows out of the fact that many commodities decrease in value very rapidly when in transit. A carload of strawberries loses from \$5 to \$10 per hour, according

to the time it has been under way. Live stock lose about \$3 per hour. But such has been the development of the "fast freight" movement that during the peach season, train loads of peach cars will move from Fort Valley, Ga., through to New York in two days. The peaches are picked when nearly ripe, loaded without delay into refrigerator cars, hurried through to market. When the peaches leave Georgia their destination is unknown, except as to general district. When they reach Washington, however, so complete and timely is the system of information which has been built up, that the shippers have learned by telegraph where the demand is greatest and the supply the least, and they have ordered the railroad to divert the car to where it is useful.

At stated times the commodity trains, the cattle trains, and the fruit and vegetable trains leave certain points, and at stated times they arrive at their several destinations. A merchant in Chicago can order half a carload of merchandise from New York on Monday, by telegraph, and receive the consignment Thursday morning. A train of berries leaves Richmond or Cape Charles, Va., at half past two o'clock in the morning and is in New York the same evening. Cattle are carried through from Pittsburgh to the docks in Philadelphia in less than twenty-four hours. The railroads carry coal, iron and similar staple products by slow freight, moving the cars as a sufficient quantity accumulates to make up full train loads. But perishable freight moves on regular schedules at passenger train speed. On the road, arrangements are made for the passage of trains filled with such commodities with just as much regularity as for that of passenger trains. And the goods are met by consignees at the destination in many cases just as a passenger is met by friend or relative at his journey's end.

Vegetables and fruit must be transported in the quickest possible time, to be kept fresh and in eatable condition, and the market should not be glutted, for the goods will not keep, and, even if they would, an oversupply means an inadequate return to the farmer or the commission merchant. These factors, applied to the enormous areas, multiplicity of communities, and complex requirements of the country, constitute a problem of extraordinary magnitude.

Having long ago surpassed Europe in the economy and dispatch with which heavy or "slow" freight is moved, American railroads are seeking to approach that degree of success in the handling of commodities which is seen in England. British achievement in this

direction has been made feasible by the density of population and the short distances the goods have to be hauled; the system there is similar to the express service in this country. Here the great areas, the long distances and the scattered population have put obstacles in the way of attaining much that the public and the carriers desire in the collection and delivery of commodities.

Speed in the delivery of their goods means saving of money to merchants, and it is they and their customers whom good and prompt service benefits. The quicker he can get what he needs, the smaller the quantity of goods the merchant must keep on hand. The benefit which comes to him through not being compelled to take the risk of laying in a large stock is transferred to the consumer in the form of lower prices. It is thus in the perfection of service that the carrier can render its greatest service in the solution of the problem of lower food costs. The freight rate on any individual shipment will always be small. It must be small enough to make it worth while for the shipper to forward his product, and in practice it works out that the freight rate is but a very small factor in the selling price of the ordinary commodity. Some typical rates from Florida points will illustrate this thought:

FREIGHT RATES TO NEW YORK

	TRANSPOR- TATION	REFRIGERA- TION
<i>Strawberries</i>		
From Starke, Fla., per crate of 32 quarts.....	\$1.30	\$0.50
<i>Oranges</i>		
From Lakeland, Fla., per crate of 80 lbs.....	.63	{ \$50 per car of 300 crates min- imum
<i>Potatoes</i>		
From Hastings, Fla., per barrel of 185 lbs.....	.83	
<i>Tomatoes</i>		
From Fort Lauderdale, Fla.....		
per crate of 50 lbs.....	.59	.18½
in ventilated cars.....	.51	
<i>Celery</i>		
From Sanford, Fla., per crate of 50 lbs.....	.50	.18½
in ventilated cars.....	.43	
<i>Lettuce</i>		
From Bordentown, Fla., per basket of 50 lbs.....	.54	.18½
in ventilated cars.....	.46½	

The first shipment of early vegetables for market was made by boat from Norfolk in 1855. Last year the Pennsylvania Railroad alone hauled nearly 100,000 cars of truck products from the South, largely berries, melons, potatoes and peaches.

Modern methods of packing and refrigerating have combined with improved track and rolling stock to effect the transportation of fruits and vegetables from the South to northern markets with the utmost possible speed. With the exception of live stock, for the transportation of which Congress has made special rules, early vegetables take precedence over all other preference freight.

To meet the demands of this traffic it is necessary for the railroads to keep closely in touch with the producing country, to know just what the agricultural conditions are and how fortunate one section has been in comparison with another. Several months before the seasonable movement begins, a representative of a railroad will make a tour in the producing region to make estimates and get opinions of shippers, station agents and others, of the probable size of shipments. Later, about a month before any particular commodity begins to move, another trip is made to confirm earlier estimates. Besides this, station agents make reports in advance, and when the movement begins they make daily reports. In this way it is possible to get fairly accurate figures upon which to form judgment of the amount of equipment needed to move the output. It has been found that the boundary of the producing territory moves north in the spring at an average rate of fifteen miles a day. Green vegetables begin to come from Florida at first in January. A little later Georgia and Alabama are the center of trucking activity. Far along in the summer, Maine and Canada have their turn in sending products to the great consuming districts.

With this continuous and rapid change in the position of the chief source of supply, complications in the railroad's part of the work are inevitable. Ventilated and refrigerator cars must be on hand for warm weather, but in the cold months these same refrigerator cars are turned into warming cars to keep vegetables from freezing. Along the line in the warm weather re-icing has to be done without loss of time. In winter, at places like New York, heated, enclosed, unloading quarters are supplied to insure against injury from the cold.

One of the causes of the remarkable growth in perishable freight brought from the South is the extension to small communities of the

advantages formerly enjoyed only by the larger cities. Formerly, fruits or vegetables were consigned direct to New York or to Philadelphia, and dealers in neighboring towns had to pay extra freight or expressage to get them to the smaller place. That made prices high beyond the reach of a family of moderate means.

Now certain zones have been created, with the larger cities as centers of distribution. For example, a town within 50 or 100 miles of New York, Philadelphia or Baltimore gets the benefit of the same freight rate that applies from the producing point to the city. This reform has extended the area of consumption and caused the traffic figures to leap upward. The Pennsylvania Railroad, for example, carried more than double the quantity of perishable freight from the South in 1913 that it carried in 1901.

The vast volume of fruits and vegetables which move where they may be most quickly disposed of are supplemented by that even larger quantity of products, including bread, groceries, meats, etc., which, while not so perishable, must receive preferential freight movement. In this latter category we include all less-than-carload freight and all articles in the first, second and third, and some commodities in even lower classes of the Official Classification. Nearly everything which one sees in a food-shop comes within the meaning of preference freight.

The pioneer fast freight organization in America was the Star Union Line, which grew out of the business established seventy-four years ago by Leech and Company, of Philadelphia, and Clark and Company, of Pittsburgh. In 1863 it was organized as an independent freight line, operating over a number of different railroads between the Atlantic coast and the Mississippi River. Ten years later the Pennsylvania Railroad Company purchased the Union Line and made it a bureau of the Pennsylvania Railroad system.

In the manner of handling, preference freight constitutes a separate class of traffic, as different from bulk freight as it is from passenger traffic. The equipment is carefully selected and preference trains have track rights not enjoyed by trains carrying coal, lumber or stone. All the cars, for example, must have air brakes. The fast freight trains running on schedule are restricted to thirty cars to a train. Each one of the cars bears a "sticker" with the word "preference" upon it. There is a rule that the "stickers" must not be detached en route, but be filed with car waybills. The purpose of the

"stickers" is to make doubly sure that the cars are despatched from their starting points in the proper trains, and reach their destination promptly.

On the westbound schedule of one fast freight line there are eleven trains which leave eastern points daily just as regularly as do the passenger trains; and eastbound there is only one train less. This does not represent the total volume of traffic, however, for only the last sections are scheduled, and advance sections are required so frequently that they are rather the rule than the exception during certain seasons. Freight must be kept moving, so a train is sent out an hour after the regular starting time if there is a large enough accumulation to warrant it.

Freight from New York, Philadelphia, Baltimore and places similarly located is delivered in from one to three days, according to the zone for which it is destined. In the zone which is one day from New York are Harrisburg, Lancaster, Williamsport, Baltimore, Norfolk, Washington, etc. Cities like Pittsburgh, Cleveland, Wheeling, Erie and Buffalo are reached the second day after shipment, while Chicago, St. Louis, Peoria, Columbus, Dayton and Cincinnati are in the three-day district. From other shipping points in either the east or west an equally rapid service is given, the zones being divided according to the distance. Trains which are run on schedules representing last sections only require advance sections to be kept well ahead of regular schedules so that congestion and delay may be avoided. On the best equipped and best managed roads the long-distance preference trains move at an average speed, including stops, of twenty miles an hour, which is as fast as passenger trains run in some parts of the country.

In the case of perishable freight, schedules have to be arranged primarily with reference to the time of arrival at destination. An early morning delivery is essential, for that is the hour of wholesale marketing in cities, and if a perishable consignment arrives three or four hours late it means a loss of not three or four, but of twenty-four hours, as far as marketing the material is concerned.

Generally speaking, there are two methods of handling preference freight. By one the car is treated as a unit. Less-than-carload shipments, irrespective of destination, are packed in the smallest possible number of cars at the start, and are later transferred and reloaded at some transfer point. By the second method, which is

followed quite extensively, the train is treated as a unit. Shipments for one place are put into one car. When possible, a solid train runs straight to its destination from the place where the cars are loaded.

Owing to the fact that small lots of freight originate at widely separated points, billed for an equally scattered number of places, it would be impracticable to allot a separate car to each point and carry it through to destination. To obviate this difficulty, transfer yards have been created, and they have been very instrumental in the development of the fast freight service. All trains are broken up at such points and the goods re-assorted. In this way all the freight for a certain section, or a certain city, no matter what the points of origin, is collected and placed in cars destined for that territory. The changes are made with remarkable swiftness and the attendant delay is inconsiderable.

A very important fact, and illustrative of the intricacy of railway working, is that in all these movements of freight, any car can be located at a very short notice. The shipper can thus be advised as to the progress of his consignment, and the consignee can be in readiness to receive and market the shipment without delay. This elimination of friction and loss through making commercial operations more stable is a very real factor in preventing economic waste.

While the chief function, and the only duty, of a railway company is to provide transportation, many railways have in the effort to increase traffic on their lines, gone out of their way to encourage improved farming methods, to increase the output of food, and thus indirectly to affect food costs.

The Long Island Railroad proved by means of experimental farms that the worst ten acres on the island could be cultivated at a good profit. The Pennsylvania Railroad has done the same thing with an experimental station at Bacon, Del. In the fall of 1908, James McCrea, the late president of the Pennsylvania Railroad, made a trip of three days over the railroad lines on the Delaware Maryland-Virginia peninsula. He saw thousands of acres of this section—one of the richest agricultural districts in the world—lying idle, with the adjoining farms flourishing, and the products of the latter in great demand in all of the large markets of the Middle and Eastern States. Having knowledge of the success attained by the Long Island Railroad with its two experimental farms, Mr. McCrea established this practical demonstration farm, where the railroad could show the

agricultural possibilities of the land on the peninsula. The land purchased at Bacon had not been farmed for over five years. It had been robbed of its fertility several years earlier, and, considering it worthless, its owners let it grow up in sassafras, sweet briar and weeds. It was in this condition when the railroad company's expert took charge. By a small application of stable manure, about fifteen tons per acre, and 500 pounds of lime, 47 bushels of corn per acre were raised on this land the first year.

When the Long Island Railroad established a demonstration farm many scoffed at the idea, and termed those interested in the enterprise "book farmers." They said it was impossible to grow anything on the waste land chosen for the experiment, that it was good for nothing but "pine barrens," and "salt ponds." The scoffing changed to admiration when in two years the Long Island people had succeeded in growing successfully 380 different varieties of plants, including cauliflower, corn, radishes, peas, asparagus, tomatoes, cabbage, carrots, beans, cantaloupes, watermelons, alfalfa, potatoes, and many other vegetables and fruits. Many railroads have for several years been exerting every effort to encourage the agricultural interests along their lines. On farmers "special instructions trains" and steamboats, operated by the railroad, lectures have been delivered before thousands of farmers by experts from agricultural colleges of different states. In addition, some railroads have carried on a campaign to acquaint the buyers and growers of different markets with those of the territory tributary to their lines. Booklets have been issued, and the traffic representatives of the companies have thus been instrumental in greatly increasing the demand for produce.

Added interest in scientific farming is one result of such an agricultural campaign. A wider market for the crops grown on a railroad line is another, with more people living along its lines, greater prosperity among the farmers, and—for the railroad itself—an increased freight and passenger traffic.

The problem of food distribution is still developing. Any reductions in the cost of transportation must in the immediate future develop out of more economical methods of packing, handling and marketing. The railroad transportation cost can hardly decline, so long as the costs of railroad operation continue to increase. The gains must really be derived from removal of economic waste. Relying upon more perfect information and education, producers must adjust their output more accurately in accordance with the demand.

The railroad can and should assist with every means in its power, in securing the shipment of all products to just where they can be consumed. More accurate adaptation of the transportation service to true market conditions, the spread of information as to markets, purchasers, and sellers, and the elimination of unnecessary stages and stoppages in the movement of goods from the producer to the ultimate consumer, should embrace those lines of experiment and study along which future development will doubtless proceed.

THE MOTOR TRUCK AS AN AGENCY IN DIRECT MARKETING

BY STANLEY ALBIN PHILLIPS,

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Introduction

The retention of the horse in the transportation of food products costs the American public upwards of a quarter of a billion dollars each year. That, in round numbers, is the annual saving that might reasonably be effected by the substitution of motor trucks for draft animals in primary agricultural haulage.

This thought does not necessarily imply the total or even partial elimination of the intermediaries, for it is recognized that the middleman often has an important and legitimate function as a distributor. Neither does it take into account the savings that would result where the power wagon is brought into active and successful competition with the railroads in so-called "long distance" hauling. On the contrary, it is based solely on the economic possibilities of the machine in primary agricultural trucking between the farms and the market or shipping point.

The cost of hauling crops from farms to shipping points is yearly growing greater. Only a short time ago the mean cost for 32 different products was 11 cents per 100 pounds; today it is near 15. Corn, for example, could be hauled in 1906 for \$1.78 a load; it now costs, on an average, all of \$2.

As a prime mover the horse has ceased to be a profitable investment. In the past ten years his price has nearly doubled. The cost of his feed has increased 163 per cent since 1908. The 750 cubic feet of barn he occupies at night is more valuable than ever before, while his hostler is paid \$60 a year more than in 1905.

The area given over to the production of his feed is more than equal to that of Illinois, Iowa, Ohio and Indiana combined. The 125,000,000 acres necessary for his annual sustenance are worth in excess of \$5,000,000,000 or more than a sixth of the total value of all farm lands in the United States.

On the usual assumption that one acre of land, scientifically farmed, will yield enough food for three persons, the horse-feed farms of this country would support 375,000,000 of people. The area devoted to the production of hay alone would sustain three times our entire urban population.

Such is the economic burden of horse haulage!

The Excessive Cost of Animal Transportation

An investigation conducted by the Department of Agriculture some years ago revealed the startling fact that the cost of hauling a \$465,000,000 wheat crop from farms to shipping points was \$34,000,000 or 7.3 per cent of its value. This conclusion was based on figures received from 2,800 county correspondents, showing that the average cost for the primary haulage of this crop was 9 cents per 100 pounds. The mean cost for beans, barley, flaxseed, hay, oats, rye and potatoes was about the same, while for apples, buckwheat, hops and rice the charge was from 2 to 3 cents higher. Vegetables and cottonseed cost 15 cents per hundredweight, and on cotton and all fruit other than apples the cost was 16 cents. The highest charge was on wool which averaged 44 cents. Generally speaking, the cost per hundredweight of any of the twenty-three different crops reported on increased with the length of haul, although there were, of course, exceptions due to variations in local conditions. Some products, such as cotton, with values relatively high per unit of weight, could be profitably transported over greater distances than other less valuable crops. Thus, in the case of corn, worth \$14.71 per ton, the cost was 7.5 cents per 100 pounds, or 10.2 per cent of the value. On cotton, which had an average value of \$220 per ton, the cost was 16 cents, only 1.4 per cent of the value.

Obviously, therefore, the length of haul, without regard to the nature of the crop transported, is of vital importance to the farmer, limited as he is by the restricted radius of action of draft animals. They confine his activity to those markets or shipping points within the circle which he can profitably serve, and limit him almost entirely to operations in the immediate vicinity. It is the high cost of primary haulage that deters him from entering more distant, and often more profitable, markets and causes him to entrust to others the marketing or subsequent distribution of his produce.

Where the Motor Truck Fits In

To the farmer, the most apparent source of economy resulting from the use of motor wagons lies in the increased radius of action possible with machine operation. It is this feature of the power-driven vehicle which broadens his sphere of activity and makes feasible a more direct and economical distribution between himself and the consumer. It is one of the most important arguments for the adoption of the motor truck as an agency in the direct marketing of food-stuffs.

It will be observed that the economic possibilities of the power wagon in that field are twofold. In the first place, the machine possesses a distinct advantage as a factor in the simplification of our present methods of food distribution. Many of the unduly aggressive intermediaries, whose excessive charges contribute so much to our high cost of living, can be eliminated by the adoption of the motor truck with its remarkable space-covering ability. Secondly, the increased speed, larger radius of action and greater carrying capacity so conspicuous in the power vehicle make possible a still further saving by a reduction in the cost of primary haulage. This dual usefulness of the motor wagon is destined to establish it as a permanent and potent factor in the disposition of farm produce.

I. SIMPLIFYING THE DISTRIBUTING SYSTEM

In considering the economic possibilities of the motor truck as an agency in direct marketing it will be interesting to observe the different results which are bound to follow the introduction of the machine in farm hauling. Three general effects will be at once apparent. The economic status of the producer will be greatly improved by better conditions surrounding the production and sale of farm produce, the burden on the consumer will be lightened to an appreciable extent by a simplification of our present distributing system, and the welfare of the nation as a whole will be materially increased.

The Improved Condition of the Farmer

Probably the most substantial, and certainly the most immediate, effect will be felt by the farmer himself. Wholly apart from the ability of the power wagon to reduce his ton-mile haulage costs, the

machine by reason of its great radius of action holds forth wonderful possibilities for widening his present sphere of profitable activity. It will enable him to enter entirely new fields, because the distance from market will no longer be the serious obstacle that it is today under horse methods. He will be able to carry his produce to the market in his own equipment whether the haul be 20, 50 or 100 miles, where he now transports it an average distance of less than 10 miles and leaves the remainder to the common carrier.

Being free from the physical limitations of draft animals, he will prefer hauling to the market although it may be 20 miles away while the local shipping point is but 5 miles distant. He will relish the opportunity to save the cost of the double handling inherent in present methods and at the same time reduce the losses usually experienced through shrinkage. The adoption of motor haulage would thus encourage among the producers a general desire to "market" rather than merely "ship" the products of the farm, and would result in an extensive elimination of the middleman.

Having enlarged his functions to include those of distributor as well as producer, the farmer will at once take advantage of his new position and begin to choose his market. This ability to select the most favorable field of operations, those which will net the biggest profits, will require a more thorough and intelligent study of the laws of supply and demand. He will learn to avoid the glutted market close at hand and to seek the more distant one with its better prices and greater opportunities that are denied his neighboring horse users. The increased speed possible with the motor wagon will enable him to reach the best market even before many of his horse-owning competitors whose hauls are shorter, and early enough for a careful search for the most liberal buyers.

He will then turn his attention to the intelligent selection of crops. Instead of limiting his efforts and, at the same time his profits, to the cultivation of only those products which can be marketed with the minimum risk of spoilage while in transit, as is the general rule under the horse régime, he will be governed by the demand. What is more, he can select his crops with greater regard to the nature of his soil, choosing those which will yield the maximum returns per acre. In that event, local demand will often be of only secondary importance in the sense that he may find a ready sale for his produce in the more distant markets if not in those near at hand. With me-

chanical haulage he will be no longer subject to local market conditions and the shifting demand of local buyers.

The farmer's interest in his new work as distributor will be further increased by the newly acquired ability to direct both ends of his business, production and distribution. The motor wagon with its advantage of greater speed will enable him to make in a given time much longer trips to market than he can at present with horse equipment as well as other trips which he would not now attempt. Similarly, it will effect a material reduction in the number of hours he allots each week to hauling, and will cause an attendant increase in the time he can devote to rest or more profitable labor.

This feature of machine operation will still further stimulate his desire for direct distribution by removing the dread of all-night drives to market. Where a 20-mile haul now takes from dusk to dawn, he will often be able to make a 50-mile round trip between supper and bedtime. Being certain of proper rest at night he will gladly go to market himself and give his personal attention to the sale of his produce rather than entrust it to an ignorant employee. Such a daily contact with the market and the numerous local buyers, a practice which is now met with only when the hauls are very short, is really necessary for an intelligent analysis of the fluctuations in public demand. And as his knowledge of selling and selling conditions increases, so will his desire for direct marketing with its greater financial gain.

In like manner, the resulting economy in labor will have a marked effect in intensifying his inclination for a more direct distribution of his produce. The drive to market with horse equipment diverts no small share of the farm hand's daily work capacity into wasteful and needless loss, and in addition contributes to a decided diminution in his efficiency as a working unit. With the introduction of motor haulage the time now spent in long tiring drives will be decreased to a surprising degree, and the man thus employed will be released for other and more productive effort. In effect this would amount to an increase in the work capacity of the producer's entire labor force, and in many cases it would bring about a very substantial reduction in his labor charge.

A saving in so important an item as the cost of labor must, of necessity, be accompanied by a lowering of the cost of production. This naturally gives the motorized farmer a distinct advantage over

the competing horse owner. He may choose to undersell his less progressive rival and retain his former percentage of profit, or he may prefer to sell at the same prices and pocket the difference. On the other hand, he may be content with his present margin of profit and willing to put what would otherwise be gain into the cost of a longer haul. The advantages to be obtained by this method—choice of market, choice of buyer, better prices and the other benefits previously enumerated—would, by widening the bounds of his selling sphere, often more than offset the profits waived. The attractions of this plan would be sufficient to insure an immediate tendency toward extensive elimination of the middleman and a resulting reduction in the expense of food distribution.

How the Consumer's Burden will be Lightened

It is quite generally conceded that the intricacies of our present food distributing system work a great hardship on the consumer, a burden that is extremely heavy and largely unnecessary. As a distributor the middleman, of course, has a well defined and legitimate function to perform, but many products are preyed upon by a long series of aggressive intermediaries who get most of the gain en route. The abuses practiced by a large number of our jobbers and commission merchants are peculiarly harassing to the producer, and contribute largely to the artificial method of pricing which is so closely related to the increasing cost of living.

The unnecessary inflation of values, from the price given the farmer to that paid by the consumer, frequently amounts to as much as 150 per cent of the producer's price. In Philadelphia the increase, according to the reports of a recent municipal investigation, ranges from 67 per cent in the case of high grade eggs to 266 per cent on live poultry.¹ The average increase on eight different products was more than 135 per cent. Similar conditions were found to exist in New York City when, in August, 1912, the New York State Food Investigating Commission inquired into markets, prices and the cost of foods. Of 60 products reported on, 14 showed an increase in price of more than 100 per cent between the wholesaler and the consumer. This increase included the profits of wholesaler and retailer and the

¹ See "A Study of Trolley Light Freight Service and Philadelphia Markets," by Clyde L. King, published by Department of Public Works, Philadelphia.

expense of transfer and house delivery. It developed that this added charge on all food products brought into New York City for consumption within the metropolitan district amounted in the aggregate to \$150,000,000 annually, the cost of transporting foodstuffs from the terminals to the consumers' kitchens.

The problem of transportation, from the time the farmer turns over his produce to the common carrier until it arrives at the terminal markets is a serious one and the charges are necessarily heavy. Such conditions must naturally exist in any large country, yet through the growth of a purely artificial system these carriage charges have become a prodigious element of cost. They have increased to an extent often absolutely unnecessary in the general economy of production and frequently represent little better than sheer loot by over-ambitious monopolies.

We are not here concerned with these larger matters, however, except in so far as they serve to indicate the hugeness of the burden borne by the consumer and to suggest feasible means for its reduction. They merit at least cursory mention in order to emphasize more forcibly the remedial possibilities of motor transportation with its resulting benefits to the consumer.

From a financial standpoint, and because of its direct effect on the cost of living, the most important result of the adoption of motor haulage as related to the consumer would be the reduction of retail prices made possible by a simplification of our distributing system. The power wagon's advantages of greater speed and greater radius of action, as has already been shown, would be potent factors in the tendency to eliminate the middleman by encouraging the farmer to market his produce as far as possible without the assistance of the customary intermediaries. The profits of the numerous middlemen could often be done away with entirely, while in many other cases the number of brokers could be so reduced that the percentage of the consumer's price received by them would be very much less than at present. One has but to refer to the reports on conditions in Philadelphia and New York City to realize the wonderful possibilities for savings in this direction.

Yet the elimination of the middleman's profit is not all. Foodstuffs, in their course between producer and consumer, pass through a number of hands, and when shipped by rail or water they are usually handled no less than ten times. At the farm the produce is loaded

on to the farmer's wagon and transported to the shipping point, where it is unloaded on to the station platform or dock. A second loading on to the cars or boat is then necessary and the actual shipment to market has only begun.

When shipment is made in less-than-carload lots from remote places the consignment is not always direct. That is to say, the produce may be transferred to other cars in which event two more handlings are necessary. Furthermore, it frequently happens that the shipment must be turned over to another railroad and the transfer may then involve still further handling caused by the cartage between depots. In either case, the produce is subsequently unloaded at the terminal only to be again loaded on to the wholesaler's wagon from which it is later removed on arrival at his warehouse. Two more handlings occur in loading the produce on to the retailer's wagon and in its removal at his store. The goods are again loaded in the retailer's wagon for house-to-house delivery and finally unloaded at the consumer's door.

Here we have a system involving ten handlings, six of which are often absolutely unnecessary with direct marketing, while two more can sometimes be saved where the retailer is eliminated. Each avoidable handling means a heavy and needless expense which must be covered by the price obtained from the consumer. By eliminating only half of the handlings inherent in our present system the motor wagon would oftentimes be able to effect a reduction of from 10 to 60 per cent in the consumer's price, the saving in any case being governed by the nature of the product and the expense of the prevailing handling methods.

Another important economy which would result from machine operation is the reduction in the losses due to shrinkage and deterioration. All perishable produce suffers from even the gentlest handling and its value is often utterly destroyed by the long series of abuses it receives on its journey from producer to consumer. Many foodstuffs deteriorate rapidly when exposed to the sun's rays on station platforms and they suffer from confinement in stuffy warehouses and freight depots. This is particularly true of fruits and vegetables which deteriorate very rapidly once decay has set in. The losses on these products from bruising and from fungous diseases quickened by frequent changes of temperature are extremely heavy.

Accordingly, it is only natural that the farmer should seek to

protect himself against these apparently unavoidable losses. His prices, therefore, must necessarily include a certain "margin of safety" to cover possible contingencies of this kind. The losses on one crop must be made up by higher prices on another.

Hence, it is but reasonable to assume that any means which will tend to minimize these losses must have a corresponding effect in lowering the prices paid by the consumer. Herein lies one of the most interesting features of motor haulage. By reducing the number of handlings now necessary, the attendant losses through deterioration and shrinkage must be proportionately decreased. And the wider the use of the power wagon in this field, the wider will be the effect on prices and the buying public.

Another advantage, though of lesser importance and for that reason more apt to be overlooked, is the improved condition of foodstuffs when forwarded direct from producer to consumer. Much of the fruit and vegetable products sold to the consumer under our present system is in an advanced stage of decay and must be discarded by him as unfit for human food. At certain seasons of the year, especially during the heat of summer when the delays on station platforms and confinement in improperly cooled cars and poorly ventilated warehouses cause such rapid deterioration, this percentage is often very large. At other times, when conditions are favorable and the handlings and opportunities for bruising are fewer, the percentage may run very low. Whatever the extent of the decay it places an unnecessary burden on the consumer by forcing him to purchase a greater quantity than would be required to yield a given amount of nutriment were the foodstuffs in good condition. It most certainly increases the ultimate cost of food by lowering the value received for each dollar invested.

A Greater National Welfare

Of no less importance, from the point of view of the economist, are the effects of motorized food haulage on the welfare of the country. There are in the United States today many millions of acres of unimproved lands which continue unproductive because of their remoteness from markets and shipping points. On much of this vast area the soil is peculiarly suited to the production of profitable crops, and a large percentage of the remainder could be made to yield handsome returns by the employment of scientific farming methods. And with all its latent possibilities such land can almost invariably be purchased

at prices from 10 to 90 per cent lower than land more favorably situated. Under present farming conditions involving the use of animal power in primary haulage the distance to market or shipping point is of vital importance. Accordingly, a haul of only 10 or 15 miles may isolate completely a district which otherwise possesses all the qualities for successful farming, simply because the cost of horse trucking beyond certain limits assumes such proportions that the small margin of profit ordinarily possible would be entirely consumed. Indeed, in some localities the margin of profit on certain crops is so small that many farmers dare not increase their hauls by as little as a mile or two. Many corn growers, for example, realize no more than 50 cents profit per acre on a yield of 30 bushels. To them, an increase of but 3 miles in the length of haul, at an average cost of 19 cents per ton-mile, would mean production at an actual loss.

The power wagon, by reason of its practically unrestricted radius of action, greater speed and superior ability for traveling over hard roads, holds forth attractive possibilities for the development of isolated farm lands. To districts without railroad facilities, and those whose very remoteness from local markets or shipping points precludes all chance for horse haulage at a profit, the motor truck offers the ultimate solution. By reducing the time and cost of primary food transportation, it removes the sole obstacle to the exploitation of our non-productive land which is otherwise suitable for agricultural purposes.

It is quite unnecessary to enter into a lengthy discussion of the results which would naturally follow the development of such lands. The excessive premiums now demanded for good lands on account of their proximity to markets and shipping points would no longer be justifiable and present farmland prices would undergo a substantial revision downward. This, in turn, would lower the cost of production and effect a material reduction in the prices to the consumer. Accompanying the extensive introduction of motor trucks in farm haulage would come a marked decrease in the demand for draft animals. Although it is impossible to say how many horses or mules each power wagon would replace, it is certainly very obvious that a widespread application of the motor idea would mean the displacement of hundreds of thousands of draft animals. Every draft animal we use requires \$200 worth of soil for his sustenance. The elimination of a single horse means the recovery of land capable of sustaining 15 persons!

II. REDUCING THE COST OF AGRICULTURAL HAULAGE

In concluding this short recital of the most important possibilities of the motor truck as a factor in the direct distribution of food products it will be interesting to inquire briefly into the merits of the machine as a cheaper medium of transportation. The power wagon is capable of effecting such remarkable savings in ordinary agricultural trucking alone, entirely apart from those economies due to direct marketing, that a few observations on this feature of machine operation will not be ill-timed.

At the outset it must be apparent that any definite statements as to the precise economies that can be effected by the use of motors, even under stated conditions of service, are quite impossible. So much depends on local conditions governing the price of feed, value of stable land, cost of labor, nature of the roads, the grades, the kind of load carried, etc., that estimates are of little value. The same is true of motor equipment. In any case, whatever statement of cost is submitted must be accepted merely as a typical example of results obtained in a given locality, and it should be taken only as an indication of the possibility for like economies under similar conditions.

The Measure of Saving

The most conspicuous item of saving in the operation of motor trucks is in the cost of labor. The machine's greater carrying capacity enables it to haul much more at a load than the average horse-drawn vehicle which usually requires, in farm work at least, an equal outlay for driver's wages. Where several teams are employed and the power wagon is of a size sufficient to care for the work done by two or more of them in a given period the number of horse drivers eliminated will naturally be the measure of economy in labor cost. This saving is often further increased by the use of trailers attached to the truck. These add greatly to the machine's carrying capacity without increasing the cost of operation in the same proportion.

Some charges, such as shoeing, veterinary and the like, are not encountered in an analysis of motor costs, yet the latter involve new items—license fees, tire repairs and renewals, mechanical replacements, etc. Depreciation, interest on the investment, insurance, taxes and housing are items of fixed expense which must be considered in either case. The first four will frequently be larger for the machine

owing to the greater investment usually involved. The cost of housing or storing on the other hand will always be less than for the horse equipment replaced, even when the change to motors has made no reduction in the number of vehicles employed.

Although operating costs cease when the truck stops working—the fixed items of expense being the only ones chargeable against it during unproductive moments—the maximum economy is possible only when the number of idle hours is reduced to the minimum. Inasmuch as the opportunities for saving by the use of motor wagons lie principally in the machine's ability to carry larger loads over greater distances and at an increased rate of speed, the best records are obtained when these features are developed to the utmost. Some really astonishing results are obtained, however, and especially in the service here considered, when surrounding conditions are most unfavorable to a realization of anything like the ideally efficient performance referred to.

In agricultural haulage savings of from 25 to 60 per cent over horse costs are by no means phenomenal. It frequently happens that on the simplest kind of trucking—straight haulage work between farm and shipping point—a single power wagon will replace six to eight horses, and numerous cases have been recorded in farm practice where a machine with one operator has done work equivalent to that performed by 16 horses and 8 drivers. In such instances the saving in labor alone is quite startling to the uninitiated.

The Reduction of Wastes in Marketing

The motor truck is often brought into direct competition with railroads, and on many occasions it has established surprising economies in straight long distance hauling. Although it is obviously impossible to show an economy in favor of the power wagon in all cases of such competitive hauling, the widely different conditions of service involved in the many examples spoken of justify the belief that the machine is destined to have an extensive development in that direction. Whenever a farmer can haul his produce more cheaply by motor than by rail he will certainly be only too glad to do so, and the benefits of the more direct distribution will be felt by the consumer as well. The savings due to the mere elimination of the needless handlings will often be in themselves sufficient to establish the econ-

omy of the machine, even where the ton-mile cost of the latter, calculated on a straight haul between shipping point and terminal, exceeds that of the railroad.

There are other economies, indirect savings not observable on a bare comparison of horse and motor costs, which will mean much to both producer and consumer. With a lower ton-mile cost as a basis for his operations, the motorized farmer will market his produce more frequently and thus realize larger profits from the resulting reduction in the losses due to deterioration and "loss-off" selling. Such an improvement in marketing conditions will, as already observed, react on his cost of production and in turn cause a lowering of the consumer's price.

Better Food and Lower Prices

The increased speed of the motor truck will make it possible for him to take advantage of the better prices offered to the earliest arrivals at market, and by shortening the time required for the trip will reduce his losses through shrinkage in transit. This is particularly true of fruit, which suffers most during the time between picking and precooling for shipment. No amount of subsequent refrigeration can repair or even arrest the deterioration which begins during that period.

The quicker trip to market by means of the motor truck results in an improved condition of the produce due to the more rapid circulation of air around it en route and in a minimization of exposure to the sun's heat. In hauling to market under present methods food products are invariably exposed for hours to the heat of the sun, the temperature being in many instances sufficient to cause fatal overripeness and even incubation in the case of eggs.

Similar improvements in the condition of foodstuffs will also follow the elimination of rail shipping wherever possible. Many products are permanently injured, to the loss of producer and consumer alike, by rough handling, exposure to the elements on shipping platforms and by contamination from foul odors in dirty stations and warehouses. Poultry, for example, suffers heavily from injuries caused by careless handling and from loss of weight and deaths due to confinement. Eggs, a particularly delicate product, absorb moisture readily and their quality is easily impaired by contact with impure air.

The elimination of these and kindred losses is of great importance to the producer in the reduction of his haulage expense, for they now constitute a very large factor in the determination of his profits. Likewise they contribute materially to the high standard of prices at present paid by the consumer.

Competing with the Railroads

The precise extent to which these wastes can be avoided or, in other words, the extent to which the power wagon can displace the railroad by direct marketing, depends on a variety of conditions. The length of haul and the size of the shipment are the most important factors. Obviously, the opportunities for the motor truck to compete successfully with the railroad will be greatest where the loads carried are not sufficient to make up carload lots, for on small consignments the freight rates are invariably higher. Short hauls, too, are apt to be more favorable to machine operation than those where the "through freight" has the right of way over long distances. Yet, there have been many cases where motor wagons have outclassed the railroad in points of speed and ton-mile cost when surrounding conditions, judged from what has just been said, would seem to be most unfavorable. Large shipments comprising several carloads have been made over distances in excess of 200 miles more cheaply by motor than by rail. However, such cases are not the rule. They simply demonstrate the remarkable ability of the power wagon as a cheap haulage medium.

The Problem of Investment

A question merely incidental to the adoption of motor wagons for direct food distribution, but one that is often offered as an argument against machine operation, is the increased investment required and the inability of the average farmer to carry it. This apparently sound objection may be completely answered in three different ways: (1) by sales made on the deferred payment plan; (2) coöperative purchases by groups of farmers; and (3) hauling by professionals.

Where the farmer buys his equipment on a time basis he may often hasten the completion of his purchase contract by hauling for others at an attractive profit. In some recorded instances of this kind the net profit realized each week has been more than \$75, an income derived from work done by the machine when it was not en-

gaged on the operator's own hauling. The profit from such an arrangement would be alone sufficient to pay for the average machine in less than a year, the farmer's own hauling meanwhile being done at no cost whatever.

In coöperative purchase by groups of neighboring farmers the burden placed on each becomes almost inconsiderable, a matter of but a few hundred dollars when half a dozen or more are concerned. Coöperative associations, already in existence among producers everywhere, can effect the necessary purchases selling the service to members at a price which need not exceed the actual cost of operation—fixed, running, maintenance and overhead charges. Experience has demonstrated that under such conditions the economy is usually much greater than in the case of individual ownership, for the equipment is apt to be operated at higher efficiency.

The third plan, under which professional carriers own and operate the equipment and sell the service to the farmers at a fair profit, has already been favorably received and successfully tried. Mass application of machines makes possible a very low operating expense, so low in fact that the cost to the farmer may often be no more than where a coöperative, "not-for-profit" association with less equipment undertakes to supply the service at actual cost. The service may be sold to the farmer on a time basis at a fixed rate per hour, day, week, month or year, on a mileage basis, or the carrier may agree to haul all merchandise at a certain price per mile or ton-mile. Each method has been successfully worked out in practice.

CONCLUSION

As a means for simplifying our present complex distributing system the motor truck holds forth greater possibilities than any other single medium we have. It offers the farmer a wider sphere of activity, choice of crops, market and buyer, a lower haulage cost and a reduction of his present losses. For the consumer it insures better food and lower prices. To the nation at large it promises the development of remote and unproductive lands, more farmers and a greater volume of foodstuffs. In view of the facts, the retention of the horse in agricultural hauling is nothing short of sheer waste.

IMPROVED PUBLIC HIGHWAYS

BY JAMES M. COX,

Governor of Ohio.

The subject of improved roads is about as old as the race itself. Our earliest forefathers found it expedient to build trails through the forests and to improve them from time to time. Ever since those early days each succeeding generation has found it more and more important to construct better avenues of travel.

The improved highway of today, however, answers an entirely different purpose from the improved roads of other days. Then it was purely a military expediency; today it is a "bread-and-butter" proposition.

Our friends from other states refer to the fact that Ohio seems to have "the good-roads fever." If the desire for better roads is a fever, or disease, well and good. We can assure our friends the ailment will not be cured until we have in this state a perfected highway wherever the course of commerce demands it; and since Ohio is so thickly populated, practically every road in the state is such a commercial highway.

Ohio is not behind other states at this time in the matter of road improvement; indeed, she compares very favorably with most of the states of the Union, and leads many of them. But, like other states, Ohio is far behind the needs in road improvement, and it is our purpose now to bring her to the front as rapidly as possible. This is to be done by paving with brick or concrete many of our more prominent roads, and by macadamizing and using gravel upon the remainder. We have provided a special levy for road improvement, which guarantees us ample funds for the present.

We propose purchasing a tract of land upon which is located shale and coal, and building thereon a sort of branch penitentiary, at which may be employed from 400 to 500 convicts in brick making. These bricks will be sold at cost to the various counties. Other convicts who can be trusted upon their honor will be given the task of building the roads.

These facts are mentioned simply to show what is contemplated in the way of road building in this state. There has never been a

period in our history when so many of our citizens were interested in the subject. This is in part due, of course, to the tremendous number of automobiles now in use. By the end of the year we shall have practically 100,000 motor driven vehicles upon our roads and highways. But all of this interest is in no sense due to the adoption of motor vehicles. It is due to a gradual awakening on the part of the people to the fact that bad roads cost more than good ones. Our farmers are coming to be business men in every sense of the word. They are capable of figuring upon the cost of transportation. They therefore readily see the financial advantage of having improved highways.

As governor of the state, I am using every endeavor to encourage improved public roads. I believe in promoting means of communication that will lower the cost of living and at the same time make life all the more desirable in rural communities. There is a direct connection between the cost of living and the desirability of living in the country; that is to say, the more pleasant we can make life in the rural communities the greater number of people will remain in such communities, and, therefore, the greater the production upon the farms. So that, summed up, it may be stated that Ohio is endeavoring to solve the high cost of living by building improved highways.

WHAT FARMERS CAN DO TO FACILITATE THE TRANSPORTATION AND MARKETING OF PRODUCE

By F. R. STEVENS,

Agriculturist, Lehigh Valley Railroad Company.

The transfer of farm products from the farmer to the consumer gives rise to a large part of the business of the country. It has to do with everything that the land produces and the people eat. It concerns the great farms and ranges of the West and it concerns the little plot of the market gardener both East and West.

It is clear that the ideal transfer is that in which the producer sells what he produces directly to the consumer without the intervention between himself and the consumer of either a common carrier or a middleman. This ideal method of transfer is realized chiefly by those farmers who sell milk, vegetables, berries or fruit in nearby markets. Their carrier is their own team and they deal directly with the consumer.

This is the simplest form of the problem. It becomes more involved as the distance becomes too great for profitable use of the farmer's team and railways become the carriers. Here again the problem is comparatively simple with respect to some products. In the grain districts of the West the elevators furnish a place where the farmers, whose only marketable product is grain, may store it ready for sale when the market invites. Large producers of fruit or other products can afford to have storehouses and ship in carloads. In both of these cases there is an approach to ideal conditions in so far as transportation is concerned.

There are many other farmers who make a specialty of some product, they put it up in attractive packages and sell to special customers, who are glad to pay a premium for the extra quality and attractive form.

I have spoken of these, not because they are all who have reached practically ideal conditions, but because in their methods they point the way in which others may succeed.

Aside from these and all others for whom conditions of transportation and marketing are fairly good, are the great majority of

farmers, men who have a small product or several small products that they wish to sell. It is in their interest that the suggestions in this article are made.

There are clearly three distinct parties, at least, concerned in the transportation and marketing of farm products, the farmer, the railway and the consumer. There is a fourth in the system now in use, the middleman. He is commonly the object of suspicion and abuse but it is difficult to see how we are to dispose of him unless an agent of the farmer or the railway or the consumer takes his place. In that case we should substitute for the commission man who, necessarily, in his own interest, takes all he can for handling products, an agent whose interests would be that of his employer. It should be said in fairness that the frequent criticism of middlemen does not belong to all of them. It is the system which makes them necessary and the avarice or dishonesty of some of them that gives rise to the criticism of all of them.

* The transportation and marketing of farm products at present are not satisfactory to farmer, railway or consumer. The farmer ships when the crop is gathered because he cannot store it, when he must sell to get money, or when roads are good so he can haul it. Selling in any of these ways he is at the mercy of the middlemen. The railways are dissatisfied because they are asked at certain times of the year for more cars than they have available and at other times have hundreds of idle cars. The consumer is dissatisfied because of the middleman and his profits and because of the high cost of living.

It is clear that, if some system could be devised and established by which the farmer could ship his produce as it is needed by the consumer week by week throughout the year and if this system could dispense with the middleman, the three parties, farmer, carrier and consumer would be much better pleased than now.

As to who shall take the initiative in establishing a new order of things there may well be a difference of opinion. Probably the farmer, the railway or the consumer might do it with a fair prospect of success, supported by the others; none can do it alone. In other words, farmer, carrier and consumer must contribute to its success if any plan is to succeed. I shall assume the initiative belongs to the farmer and shall suggest some ways in which he may help solve this problem.

1. The farmer should pay much more attention than now to the

grading and packing of what he has to sell. This statement applies to whatever he has to market but may be illustrated by his method of marketing eggs. He is careless as to time of selling them, holding them until some errand takes him to town. The result is they are no longer strictly fresh. He does not assort them and so sells small and large, white and brown in one lot, getting less for his output of eggs than he might easily obtain were they properly graded as to size and color. He is not careful to have his product credited to himself. Every farmer should grade his produce according to market demands and then be so sure of its quality that he is proud to attach his name and address. Take or ship such produce to market in attractive packages and both producer and consumer will be satisfied.

At this point the railway comes in as a friend to the farmer. The farmer does not know how to grade and pack and ship his eggs or his fruit, or his vegetables. The railway will run a car or a train, if necessary, to every station on its lines where there is a demand for such instruction and show farmers how to do all these things. A proper application of this knowledge would prove invaluable to farmers. Recently an agricultural paper asked some seventy egg dealers, who together handle over 900,000 cases of eggs annually, what an application of this knowledge would mean to them. The replies of sixty-three of them were to the effect that if farmers or communities of farmers would adopt these modern and up-to-date methods they could well afford to pay a premium above the market price on such shipments. And what is true of eggs is true of all other farm products.

2. A second step the farmer may well take toward the solution of the problem of transporting and marketing farm produce is the improvement of country roads. An extract from a statement from the office of public roads in the United States Department of Agriculture emphasizes the importance of this. "There are counties rich in agricultural possibilities, burdened with bad roads, where the annual incoming shipments of food exceed the outgoing shipments in the ratio of four to one," it says. "Many such counties, with improved roads, would not only become self-supporting, but would ship products to other markets."

This is not true of all counties but in every county it is true that many much used public roads are frequently impassable for heavy loads and oftentimes when the farmer needs most to do his heavy hauling he cannot. The roads which an ordinary farming commu-

nity can finance and build are not good enough. Such a community should have state aid and the so-called state road. To get these, the farmer must go to the state and here again the interest of farmer, railway and consumer is identical.

The farmer through his grange and through his representative should in every proper way try to direct the expenditure of state money appropriated for roads so that the roads built by the state or with state aid shall be market roads or farmers' roads rather than pleasure roads. It is now too apparent that the state roads are built where the influence of automobile associations locate them rather than where the interest of the farmers would place them. The farmers, the railroads and the consumers in the cities, if the movement for good roads is wisely managed, will stand together and see that state money spent on roads is spent where it will help all, is spent in building market roads rather than pleasure roads.

3. Assuming the farmer's produce is properly graded and packed and that the roads are so good he can deliver it at a railway station whenever it is needed and the weather and his leisure permit, there is a third step necessary to make the first two available to their full value. This is the erection at suitable intervals of storage warehouses along the nearest railway. In the erection of these the farmers of one or two townships or some of them would need to unite. In such coöperative enterprises it is always better to have a good many small stockholders rather than a few large ones. An effort should be made to interest financially as many as possible in the undertaking.

The warehouses should be large enough to store the potatoes, apples, cabbages, etc., of that district from the time they are harvested until a suitable market offers. It should not be necessary to provide for all the products usually sold but should be of a size to store all those commonly rushed to market because the producers have not room enough or money enough to keep them. There will be some farmers in the territory of each warehouse who have storage room of their own and capital enough to keep their products until they can be marketed profitably, but such farmers would probably ship through the warehouse and would find it valuable in other ways. Such a building would prove useful to all the farmers of the vicinity.

The warehouse should be so constructed as to protect articles from the cold. It should also have room for the storage of hay, grain and feed, and there should be a shed attached for the lime and

fertilizer. It should have a siding of its own, or room for its cars on some other siding. In immediate charge of the warehouse there should be some man whose whole time could be given to the receipt of products at the warehouse, their care and their shipment; or some man with other business who could attend to this as a side line. It is probable that the presence of an agent to receive and receipt for produce on one or two regular days each week might be sufficient at some warehouses while at others the entire time of a man might be required. The arrangement with him should be somewhat elastic, so that the extent of his service would be determined by the work to be done. This man would need to be more or less of an expert in grading and packing for shipment the farm produce in that vicinity.

One of the reasons why some farmers now rush their crops to any market that offers in the fall is that they need money and are forced to sell. To meet this need there should be an arrangement by which money could be borrowed on warehouse receipts for a part of their face value. Banks are glad to loan upon warehouse receipts for butter 75 per cent of its market value. While it is not to be expected that upon general farm products such as hay, grain, fruit and vegetables they would loan so large a per cent of market value, the trend of legislation and of business practice is to make it easier for the farmer to borrow with land or produce as security. It is reasonable to suppose that upon warehouse receipts for general produce 50 per cent of the current market value would be advanced by local banks. Most farmers would not need such loans and it should be the policy of the warehouse to discourage them and to bring its patrons to such a financial condition that advances would not be necessary.

Each warehouse should have its board of directors and one man from each of the local boards should belong to a general board in control of the entire system or in a general section or along a railroad. The general board of directors should employ a general manager whose duty it would be to standardize the grading of produce at the different warehouses, to market it, and in general to look after, with such assistance as might be necessary, all the warehouses of the system.

The advantages of such a system of storage warehouses are evident: 1. The farmer could store in them, when roads were good and he had the time, all the produce he wished to sell. 2. His produce, graded and packed, either by himself or by the warehouse agent to suit market demands, would bring higher prices. 3. His produce,

whatever the amount, would get the benefit of shipping and marketing in carload lots. 4. One of the chief duties of the general manager would be to study market conditions and sell the produce from the different warehouses so as to get the most for it. It goes without saying that such selling would give the farmer more for his produce than he gets by present methods. 5. These warehouses would give a place where farmers could store lime and other articles, purchased by them in carload lots. Under present conditions these frequently come when work is pressing or when the weather is bad. The car must be unloaded or demurrage paid and much inconvenience results. With a storehouse at hand the freight could be placed there and drawn home at leisure. 6. The farmer would be enabled to dispose of products he cannot use or sell with much profit now. The culls from apples could be turned into cider or vinegar and the culls from potatoes into alcohol. Not that this could be done at each warehouse, but at some of the warehouses plants could be installed to which such culls might be shipped and turned into valuable by-products.

These are all advantages that would accrue to the farmers and the shippers from such a system. But the railroads too would be benefited. Such warehouses would mean that farm products would be sent to the city week by week throughout the year, according to the demand of the customer and this would mean that the lack of cars which is now so annoying to shippers and railways in the fall of the year would no longer exist. Nearly all railways have enough cars to move the freight originating along their lines and also that coming to them from other railroads were it distributed as it should be throughout the year. It is a vicious system of shipping that demands a thousand cars in September or October or any other month and requires only a third of that number at other times.

I have spoken of some of the benefits to the farmer and the railroad resulting from such warehouses. The consumer would also be helped. Such warehouses built along a railway out in the country where land and labor are cheap are clearly the places where the food supply of the city, the products of the farm, should be stored rather than in the cities where such storage is expensive.

Everything shipped to the city before it is needed for consumption must be cared for at a greater expense than if left in the country until required. This additional and unnecessary expense is borne in part by the farmer, who gets too little for what he sells, and in part by the

consumer who pays too much for what he buys. It has been shown by those investigating the high cost of living in New York City that out of \$500,000,000 paid for food by the consumers, \$150,000,000 was for expenses and commissions after all charges up to and including the New York terminals were paid. Without doubt quite a large part of this immense sum was for storage of surplus products until needed.

In the plan I have suggested, the general manager would sell the produce stored at the regular warehouses. These sales would at first be to commission houses. Later, as he became familiar with the market, he would sell to retail grocers, hotels and clubs, and later still, if present social movements develop as seem likely, he would deal directly with agents buying for the housewives', consumers' leagues, etc. Thus gradually would the middleman disappear and the agent of the producer deal directly with the agent of the consumer.

The most difficult part of the plan I have outlined lies in the co-operation necessary among the farmers building a single warehouse and later among the directors of the several warehouses in managing the entire business. I do not for a moment suppose that such a system could or would spring up in a night or in a year, but I believe that some such system, with its plan of operation much like that I have suggested, is bound to come. It is feasible and much better than the methods or lack of methods now existing. Farmers are averse to coöperation, especially in the East where there is much less of it than in the West. There is needed here a campaign of education as to coöperative enterprises that are succeeding, relating especially to their place of organization and their method of doing business.

The agricultural departments of our railways could not do any better work for themselves, for the consumer and for the farmer, than to enter upon the education of the farmer in this matter of coöperation. There are thousands of successful coöperative enterprises in the United States, to say nothing of those, still more numerous, in other countries. Some of them, for example, the Eastern Shore of Virginia Produce Exchange, with headquarters at Olney, Accomac County, Va., are doing much the same work as would be done by a system of warehouses such as I have suggested. The railroad agricultural department has been working with the farmers for better crops; the next work for it logically to do is to show farmers how to market these crops in a better way.

SOME ASPECTS OF FOOD CONSERVATION BY REFRIGERATION

BY FRANK A. HORNE,

President of the Merchants Refrigerating Company, New York, and Chairman
of the Commission on Legislation of the American
Association of Refrigeration.

There has been a remarkable reversal of public opinion in the past three or four years regarding the place cold storage and refrigerating have occupied with regard to the high cost of living.

The people, quite generally, led by newspaper agitation, entertained the idea that cold storage facilities were used to artificially control markets and increase prices; that foods were carried for long periods of time, and that the process was detrimental to the public health. It was then that the politicians appeared and various legislative proposals were introduced to control and greatly restrict the cold storage industry. In consequence of this situation and in response to the demand of the business men, whose legitimate enterprises were being unjustly assailed, a series of investigations and hearings were held which demonstrated beyond doubt that the popular notion and newspaper sensational attacks were entirely unfounded and erroneous, and that the cold storage warehousemen performed a useful public function in conserving our perishable foods, preventing deterioration and waste, by affording a scientific method by which the great surplus production of the flush season could be wholesomely preserved for consumption when nature rested from her labors and scant provision issued for the insistent and regular needs of mankind.

Then, too, it became apparent that the cold storage process, by enlarging the markets from the immediate time of production to the longer period of the year's cycle, encouraged the farmer to increase his yield, by making profitable his venture and led him to further develop the increasing outlets for his products. Thus to provide a means by which the maximum production can be carried forward a few months to the lean months, is no less a boon and a conserving instrument than is the transporting railway which brings the distant native food to those climes which fail to produce the necessities and luxuries of a bountiful table.

It is a significant fact and a tribute to the excellence of the service that until the extent of this means of preservation became known, the public believed that the out-of-season products they were using were of current production because of the quality and wholesomeness of the foods thus made available.

That was a wise maxim of Benjamin Franklin, that "A penny saved is a penny earned," and is applicable to the salvage of waste made possible by the use of refrigeration in all the processes of handling our perishable food products. In the old days before these modern facilities were made available, a period of flush production meant a glut in the market and large quantities of spoiled and utterly useless foods, which must be sent to the dumps and by reason of the losses, subsequent production was greatly curtailed. With cold storage at hand the contrary condition prevails with the possible elimination of waste where fully employed and stimulation of profitable production.

The extent of the facilities for the conservation of foods by refrigeration is indicated by the following figures from the *Ice and Refrigeration Blue Book*: In 1911 there were 860 public cold storage warehouses having about 169,541,000 cubic feet of storage space and representing an investment of approximately \$75,000,000. It is estimated that the value of goods stored in one year ranges from \$500,000,000 to \$700,000,000. Notwithstanding these large figures, it is calculated that not over from 5 per cent to 10 per cent of the annual production of such foods as eggs, butter, poultry and meats are placed in cold storage.

It is not difficult to demonstrate the proposition that refrigeration and cold storage are great agents of conservation of our perishable foods, but it is pertinent to inquire whether the dangers and objections to cold storage, which have been mentioned, really exist or are sufficient to overcome the conservation function. It will be well to consider the answers which the experts and scientific investigators give to these questions as presented in their testimony at the hearings and the other official investigations which have been held.

The statement that the cold storage warehouses helped certain interests to control prices is refuted by the testimony before the United States Senate committee on manufactures that the warehousemen generally do not own the goods—that in 27 leading warehouses during 1910 there were 9,380 storers, and that in one New York establishment there were 1,442 owners of goods stored.

That cold storage has had an injurious economic effect was further disproved by a study of average prices of butter and eggs by Mr. F. G. Urner, editor of the *New York Produce Review*, in which the market values of these goods for a period of ten years before the advent of cold storage were compared with a like period subsequent to the general use of refrigerating warehouses. The result of this inquiry was presented before the committee on manufactures of the United States Senate and appears on page 137 of their hearings. Mr. Urner's conclusions may be summarized as follows: "The per capita consumption of eggs at New York has increased largely since ample cold storage facilities became available." Also he says: "The average price of fresh gathered and storage eggs taken together were lower during the season of scarcity since cold storage has been available than were the prices for fresh gathered eggs before cold storage was available, notwithstanding a well known advance in the prices of nearly all commodities."

The Massachusetts commission on cold storage has this to say as to the effect of cold storage on increased production and price:

"The per capita receipts of the chief food products subject to cold storage handling, namely, eggs, butter and poultry, increased greatly in Boston and New York markets during the decade 1901-10, as compared with the decade 1881-90, prior to the general adoption of cold storage methods. This fact appears to indicate that cold storage has contributed to increase the volume of production." Again this report says: "The average prices of butter and poultry were lower in the second decade than in the first; the average price of eggs was slightly higher, but this fact is explained by peculiar conditions affecting the egg market."

With respect to the alleged injurious effect of cold storage on health, there is an abundance of scientific testimony to the contrary. On this phase of the subject the Massachusetts commission declared itself as follows: "Instead of being a menace to the public health, cold storage has, in the main, exhibited itself as a great agency for the conservation of the vital resources of the population. It has enlarged, diversified and enriched the food supply of the people. Without cold storage the crowded masses in the urban centers would be obliged to subsist on a dietary at once more meagre and more costly than that enjoyed at the present time."

There is much testimony of experts with regard to the whole-

someness of cold storage foods. The following may be mentioned as eminent advocates: Hon. James Wilson, ex-secretary of agriculture; Dr. H. W. Wiley, Prof. William. T. Sedgwick, of the Massachusetts Institute of Technology, Dr. Wm. J. Gies, professor of biological chemistry, and Dr. M. E. Pennington, chief of food research laboratory, United States Department of Agriculture.

The latter testified before the Senate committee that, in reference to poultry, "There would probably be a greater change in twenty-four hours if the temperature was from 65° to 75° F., than if the temperature was 10° F. for twelve months." Thus clearly indicating that waste, deterioration and loss occur through absence of refrigeration in the handling of these products rather than in period storage.

The common notion that goods are generally held for very long periods in cold storage is disproved by the report of the secretary of agriculture last year, showing the following average periods of storage:

	Months
Beef	2.3
Mutton	4.4
Butter	4.4
Poultry	2.4
Eggs	5.9
Fish	6.7

There has been no objection to proper and reasonable regulation such as supervisory inspection and publicity of holdings, and the fact that cold storage warehouses continue to thrive in spite of the crudities and burdensome features of some of the provisions of the cold storage laws, which have been enacted in several states, is a demonstration that cold storage preservation is a vital and valuable public utility and a vast agency of conservation in respect to the food products of the people.

PREVENTION OF WASTE AND SEASONAL PRICE FLUCTUATIONS THROUGH REFRIGERATION

BY GEORGE K. HOLMES,

United States Department of Agriculture.

Cold storage was originally and primarily used for the purpose of preventing the waste of foods. The Indians of the northern part of what is now the United States, and of Canada, packed fresh meat in snow to avoid thawing. They were found doing this when the white race first came and the whites adopted the practice. In the course of time the whites had their ice houses, which provided cold storage facilities for milk and butter, fresh meat, berries and other foods for very short periods of time. The main object was to prevent waste. The extension of ice cooling to refrigeration in commercial use followed and also the packing of dressed poultry, fresh oysters and other perishable foods in ice for shipment.

As foods were placed in some sort of temporary cold storage to prevent waste, it was incidentally observed that their utility was extended in time. The importance of this to men engaged in handling food commercially was very great. With regard to the early commercialization of cold storage, the testimony of Mr. F. G. Urner of the Urner-Barry Company, publishers of the *New York Produce Review* and of the *New York Producers' Price Current*, is quoted:

The development of the cold-storage industry as a public utility in food preservation was gradual, and it is impossible to specify any year when it began to raise the price of the commodities stored during the season of greatest production, especially as the price levels during that season have been variable, ever since storage has been an important factor.

The greatest development of cold storage as a public utility began with the introduction of mechanical refrigeration shortly before 1890. From the latter date the development was rapid. I should say that the system was established as having an influence upon prices during the flush season somewhere from 1890 to 1893, but it would be a work of considerable magnitude to dig out statistics of values which would indicate a positive influence upon prices due to this cause; and, even if the price levels were found to have advanced during the flush seasons in one of those years, it would not be certain that it was due to cold storage, because there are other influences affecting prices that may be of equal importance, and, in considering these influences, it is very difficult, after a lapse of twenty years, to determine the controlling factors.

While I can not answer your questions specifically, my opinion would be that this influence was first felt some time between 1890 and 1893 in respect to fresh meats, dressed poultry, butter, and eggs.

So great has been the development of cold storage that it is now all but impossible to make up a complete list of commodities placed in such storage. These commodities are not only foods, but they include articles that may be destroyed by insects in the larval stage, and non-food articles that may be spoiled by bacteria. The purpose of this storage for some articles is exclusively to prevent waste; with regard to other articles the object is to prolong their commercial utility into seasons when their production is relatively low or has ceased. Notwithstanding the difficulties of compiling a large list, the attempt has been made with the result found in the list on pages 55-56.

Commercial cold storage has become so diversified and has so thoroughly entered into many lines of business that the number of public and private warehouses that provide facilities for such storage has grown to nearly 1,000 in the United States. In the absence of necessary information it is impossible to estimate the value of the commodities placed in these warehouses during one year, but the factors for making an estimate for fresh beef, mutton and pork, and butter and eggs have been roughly determined by the writer and these factors indicate that the value of fresh beef placed in cold storage in a recent year (mean of 1909-1910 and 1910-1911) was about \$15,000,000; of the fresh mutton, \$1,600,000; of the fresh pork, \$18,000,000; of the butter, \$40,000,000; and of eggs, \$64,000,000. The total wholesale value of these five commodities received into cold storage during the year was about \$138,000,000 at the mean wholesale prices of the year in many cities throughout the United States. The quantity of these commodities received into cold storage during that year has been computed to be as follows: Fresh beef, 131,000,000 pounds; fresh mutton, 20,000,000 pounds; fresh pork, 176,000,000 pounds; butter, 157,000,000 pounds; eggs, 296,000,000 dozens. If these quantities are compared with the production of the census year 1909, these fractions follow: Of the fresh beef, census slaughter, 3.1 per cent; of the fresh mutton, census slaughter, 4.1 per cent; of the fresh pork, census slaughter, 11.5 per cent; of the butter, census farm and factory make, 9.6 per cent; of the eggs, census farm production, 18.7 per cent; of the eggs, cen-

sus farm production plus one-fourth for conjectured non-farm production, 15 per cent.

Much definite information has been obtained by the writer for the National Department of Agriculture with regard to the business of the keeping in cold storage of fresh meats, dressed poultry, butter and eggs. This was obtained from cold storage warehouses in all parts of the United States and was stated by them in such form as to permit calculations that establish a great variety of results. These commodities have seasons of relatively high and relatively low production, a condition that makes them especially suited to cold storage for the purpose of taking them out of a period of natural high production and carrying them forward to the period of natural low production. According to the reports made by warehousemen, the principal months when fresh beef is placed in cold storage are September, October and November; mutton, August, September and October; butter, June, July and August, and sometimes May; eggs, April, May and June. Pork is quite well distributed throughout the year, and the prominence of winter receipts in cold storage is barely perceptible. Poultry is made up of diverse elements. Broilers go into storage from the latter part of August until November and roasters from October to December. There are, besides, the different varieties of poultry, including turkeys. November, December and January, and sometimes October, and even August and September are the heavier cold-storage months.

During the three heavier cold-storage months of 1910-1911, 47 per cent of the fresh beef placed in cold storage during the whole year was received into the warehouses, 59.8 per cent of the fresh mutton, 59.2 per cent of the dressed poultry (November, December and January); 70 per cent of the butter, and 79.4 per cent of the eggs. On the other hand, in the lighter cold-storage months of the same year, February, March and April, 10.3 per cent of the fresh beef placed in cold storage during the whole year was received into the warehouses; in May, March and April, 8.1 per cent of the fresh mutton; in May, June and July, 3.4 per cent of the dressed poultry; in February, March and April, 2.7 per cent of the butter, and in December, January and February, 1.4 per cent of the eggs.

The variations of seasonal production are little known by the general public. They are not so large as is often supposed for pork, butter and eggs. The Cincinnati *Price Current* collects statistics

of hog slaughter "in the West," and, based on these statistics, the mean monthly percentages of the annual slaughter for the nine years 1903-1911, are as follows, beginning with January: 10.7, 9, 7.5, 7.2, 8.7, 9.3, 7.7, 6.7, 6.1, 7.3, 9.2, 10.6; total 100. From the records of 197 creameries properly distributed geographically, obtained from the Dairy Division of the Bureau of Animal Industry of the U. S. Department of Agriculture, the following percentages of the year's production of butter in 1910 have been computed, beginning with January: 6.4, 5.5, 6.8, 7.9, 11, 12.5, 10.6, 9.6, 9.2, 7.9, 6.5, 6.1; total, 100. For the purpose of this study, all of the normal egg-laying records that could be found have been consolidated, and the production of each month has been converted into a percentage of the annual total. The percentages, beginning with January, follow: 6.6, 7.1, 12.4, 13.4, 13.3, 10.7, 9.6, 8.6, 6.2, 4.2, 3.1, 4.8; total, 100.

The length of time during which fresh beef, mutton and pork and dressed poultry, butter and eggs are usually carried in cold storage is a few months. This fact is established by the reports of many warehouses which contributed the information summarized in this article. Newspapers have led the public to believe that these foods are commonly stored during fabulous periods, but the facts are as herein stated. It is established that 71.2 per cent of the fresh beef received into cold storage in the year 1909-1910 was delivered within three months, 28.8 per cent of the fresh mutton, 95.2 per cent of the fresh pork, 75.7 per cent of the dressed poultry, 40.2 per cent of the butter, and 14.3 per cent of the eggs. Within four months after it was received, 86 per cent of the fresh beef was delivered, 42.7 per cent of the fresh mutton, 96.5 per cent of the fresh pork, 85.3 per cent of the dressed poultry, 53.4 per cent of the butter, and 22.6 per cent of the eggs. The percentage of receipts delivered in seven months is 99 for fresh beef, 99.3 per cent for fresh mutton, 99.9 per cent for fresh pork, 96.1 per cent for dressed poultry, 88.4 per cent for butter, and 75.8 per cent for eggs. Lastly, let the percentages for the deliveries of ten months be stated. These are represented by 99.7 per cent for fresh beef, 99.5 per cent for fresh mutton, 99.9 per cent for fresh pork, 98.9 per cent for dressed poultry, 97.8 per cent for butter, and 99.9 per cent for eggs.

There is always a carry-over of these commodities into the next natural storage year, due almost entirely to the reception into cold

storage near the end of the year. While the principal portion of the receipts into cold storage during the year are found in certain months of relatively large production, yet there are receipts during every month of the year and a large portion of those near the end of the storage year are carried into the next year. From the natural storage year ending August, 1910, 9.6 per cent of the receipts was carried over to the next year in the case of fresh beef; the percentage for fresh mutton for the natural storage year ending July, 1910, was 15.1 per cent; for fresh pork for the natural storage year ending April, 1910, 5.4 per cent; for dressed poultry for the natural storage year ending July, 1910, 7.7 per cent; for butter for the natural storage year ending April, 1910, 4.9 per cent, and for eggs for the natural storage year ending February, 1910, 0.2 of 1 per cent.

In the investigation of cold storage by the writer for the U. S. Department of Agriculture, some of the results of which are utilized in this article, the warehousemen reported the receipts and deliveries for each month of certain years, and consequently it is easy to compute the average time of storage. The fresh beef received into storage during the year beginning May, 1909, was kept there on the average for 2.28 months; the fresh mutton, 4.45 months; the fresh pork, 0.88 of 1 month, and the butter 4.43 months. The dressed poultry received during the year beginning March, 1909, was kept on the average 2.42 months; the eggs, 5.91 months.

If a portion of a product is withheld from consumption at a time of the year when production is relatively large and released for consumption at a time of the year when production is relatively small, the academic logic of the proceeding is that prices will be raised during the period of natural surplus and depressed during the period of natural scarcity, so that there will be in operation an equalizing force. Prices should be more even through the year than they were at a time when there was a glut in one season and a scarcity in another.

To test this logic with facts it is necessary to establish the mean wholesale prices of the six commodities under discussion, and such prices have been obtained for many cities of the United States and properly consolidated to form a single mean for each month from 1880 to 1911. This whole period is divided at 1893 and the price statistics of the preceding years have been consolidated to a

single mean for each month for each commodity. This period is distinctly an antecold-storage period.

The cold-storage period beginning in 1893 and ending with 1911 is subdivided into two periods at 1902 for the purpose of making a group of the more recent cold-storage years during which the business reached its highest development. These three periods are referred to conveniently as the first, second and third.

The mean prices established as already mentioned have been converted into index numbers by the process of using the mean monthly price of the year as a divisor and the price of each month as a dividend. Index numbers so computed stand for relative wholesale monthly prices and avoid expression in dollars and cents. A treatment of the problem by using prices expressed in money instead of in index numbers would thoroughly befog the matter for the reason that the purchasing power of money and also cost of production and the relationship between demand and supply have changed. It is only necessary to compare the mean relative prices of the index numbers for the first period with those for the third period to determine whether there has or has not been a tendency toward equalization of prices. It is evident that, if the prices for all of the months were the same, the index numbers would all be 100. Every departure from uniformity of prices in cents is a corresponding departure from uniformity of index numbers.

Let the first and third periods be compared for prices of fresh butter in New York, as compiled by the Urner-Barry Company. For 11 of the 12 months there was a tendency toward uniformity and for one month, April, a tendency away from uniformity of prices.

If the prices index numbers of the first period, which stand for fresh butter, are compared with those for cold-storage butter in the third period, it is evident that for every one of the 12 months there was a tendency toward uniformity of prices.

The evidence for eggs is similar, but not so strong. A comparison of the first and third periods for fresh eggs finds a tendency toward uniformity of prices in 8 months and away from uniformity in 4 months; and if the fresh eggs of the first period be compared with cold-storage eggs of the third period, there is a tendency toward uniformity of prices in 10 months and away from uniformity in 2 months.

Comparison may be made also for the consolidated prices compiled for many cities. Comparison is made between the first and third periods, and no cold-storage prices are included. There are 13 monthly quotations for each year, for the first of each month; January 1, following the calendar year, being included to round out the year.

For beef there was a tendency toward uniformity of prices for only 3 of the 13 months; for mutton, for 9 of the 13 months; for pork, for only 3 of the 13 months; for dressed poultry, for 8 of the 13 months; for butter, for 11 of the 13 months; and for eggs, for 9 of the 13 months. The general fact may be regarded as established that there was a tendency toward uniformity of prices for four of the commodities, and that there was a contrary tendency for fresh beef and fresh pork. The abnormal circumstances affecting the slaughter of cattle and hogs in the third period very likely account for the apparent exceptions of fresh beef and fresh pork to the general fact of tendency toward uniformity of prices. At any rate there is no evidence that the tendency away from uniformity of prices for fresh beef and fresh pork was due to anything done by the great packing-houses.

It is only by comparing the mean of a period of years with the mean of another period that the broad principle with regard to this matter can be established. If two adjacent years are compared, the results will differ more or less from those for the averages of periods of years, as appears in the following comparison: The period from October, 1909, to October, 1910, was a fairly normal one in the matter of production, supply, and price of butter and eggs, but more or less abnormal with regard to fresh meats. The year from October, 1910, to October, 1911, was abnormal for butter and eggs, as well as for the other commodities. There was a marked tendency toward inequality of prices from the former to the latter year in the case of beef, pork, butter and eggs, and a tendency equally marked toward uniformity of prices in the case of mutton, while in the case of poultry, there was a perceptible, but not pronounced, tendency toward uniformity of prices.

It is therefore apparent that the contention of the cold-storage interests that cold storage has counted for uniformity of prices is largely true, but it is not true for all commodities nor for all comparisons of years and periods.

The problem is a complicated one and the factors are not all ascertainable, or certainly not with definiteness. That there should be, *a priori*, a tendency toward equalization of prices under the régime of cold storage in comparison with the antecold-storage period has seemed a logical conclusion to many intelligent men and has been the contention of the cold-storage interests. May it not be that the logic of the matter is disturbed by its human element, by the psychology of trade? The customer of the cold-storage warehouse who buys butter in June and places it in cold storage to be sold at some future time must receive a higher price per pound than he paid for it to cover costs and return him a profit. The expectation that he will do so is solely the reason why he is engaged in the business. It depends upon his judgment, whenever any future time has become present time, whether he will receive his highest rate of profit by selling now or by deferring sale until another future time. But all men who have bought butter and placed it in cold storage for future sale may or may not have the same judgment, and herein may be found room for regularity or irregularity of prices, or a tendency toward or away from uniformity, one year compared with another, and one period of years compared with another.

COMMODITIES PLACED IN COLD STORAGE

Ale	Bluing	Citrons	Figs
Ale (ginger)	Brussels sprouts	Clam broth and	Fish, canned
Anchovies	Buckwheat	juice	Fish, dried
Apples, evaporated	Bulbs	Clams	Fish, for bait
Apples, fresh	Butter	Cocanuts	Fish, fresh
Apple waste	Cabbages	Confectionery	Fish, pickled
Apricots	Canned foods	Crabs	Fish, smoked
Aqua ammonia	Cantaloupes	Cranberries	Flour
Asparagus	Carrots	Cream	Flowers
Bananas	Catchup	Cucumbers	Fruit juices
Beans	Cauliflower	Currants	Fruits, California
Beans, string	Caviar	Cymbblings	Fruits, candied
Beef extract	Celery	Dates	Fruits, dried
Beef, fresh	Cereals	Eggplant	Fruits, fresh
Beer	Cheese	Eggs	Furs
Beets	Cherries	Endive	Game (meat and
Berries	Chestnuts	Extracts, flavoring	birds)
	Cider	Ferns	Grape fruit

Grapes	Melons	Peppers	Sirup, maple
Gutta-percha	Milk	Pickles	Sirups
Herbs	Milk, condensed	Pineapples	Skins
Holly	Mucilage	Plants	Smilax leaves
Honey	Mushrooms	Plums	Spinach
Hops	Mustard, French	Pork, corned hams	Sponges
Horseradish	Mutton, fresh	Pork, cured hams	Squashes
Ink	Nuts	Pork, fresh	Strawberries
Jellies	Oil, olive	Potatoes, Irish	Sugar, maple
Kale	Oils	Potatoes, sweet	Sweetbreads
Lamb, fresh	Okra	Poultry, dressed	Tangerines
Lard	Oleomargarine	Preserves	Thyme
Laurel leaves	Olives	Provisions	Tomatoes, canned
Leeks	Onions	Prunes	Tomatoes, fresh
Lemons	Oranges	Radishes	Trees
Lettuce	Oysters	Raisins	Turnips
Limes	Parsley	Rhubarb	Veal
Lobsters	Parsnips	Rice	Vinegar
Macaroni	Paste	Rose bushes	Watermelons
Mandarins	Peaches, canned	Salad dressing	Waters, mineral
Meats, dried	Peaches, evaporated	Sauerkraut	Wines
Meats, fresh	Peaches, fresh	Sausage casings	Woolens
Meats, pickled	Peanuts	Scallops	Yarn
Meats, smoked	Pears	Shallots	Yeast
Medicines, drugs, etc.	Pease	Shrimp	
		Shrubs	

RELATION OF JOBBERS AND COMMISSION MEN TO THE HANDLING OF PRODUCE

By C. W. THOMPSON,

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So long as each locality produces its own food supply, the problem of distribution is very simple. Either there is no distribution at all, viz: each consumer produces his own supply or there is direct sale by producer to consumer as in the old time fairs, or there is at most a local merchant who acts as an intermediary. A jobber or commission man does not fit into such a simple local economy and this explains the absence of such middlemen until about the beginning of the eighteenth century.

It is only as economic changes tend to broaden markets beyond the producing localities that the need for a larger distributive machinery arises. Such a widening of the market along geographical lines was a characteristic change during the eighteenth and nineteenth centuries, mainly as a result of improvements in canal and railway transportation. A still further widening of the market has taken place during the last three or four decades, mainly as a result of improved means of refrigeration, but the latter extension of the market has been one of time rather than of space.

That the widening of markets, made possible through improved transportation and refrigeration, is desirable will scarcely be questioned by those who are conversant with the limitations and instability of conditions under the early local economy as contrasted with the variety in supply and the greater stability in prices of the larger markets. The form of distributive machinery that is best adapted to the needs of the enlarged markets is, however, not so clear.

It is the purpose of this paper to explain the relation of the commission man and jobber to the handling of produce in the enlarged markets of today, and to discuss some of the problems that have arisen in connection therewith. By commission man is meant an agent stationed at a primary market for the purpose of receiving consignments from shippers at a distance and disposing of the same at a stipulated rate of commission on the selling price. The term

jobber is used to apply to those dealers in the primary markets who buy outright from shippers at a distance, either through traveling agents or according to mailed quotations and who sell to retail agencies or to other jobbers in the same or in other primary markets.

A survey of the agencies handling produce in our primary markets twenty or thirty years ago discloses very few jobbers. Practically the whole field was held by the commission man. It was he who acted as the sole intermediary between the local shippers and the retail agencies of the cities during the initial widening of the market. The advent of the jobber into this line of business came at a later date.

To understand why the commission man rather than the jobber first entered the primary market in the handling of farm produce we must bear in mind the degree of hazard which was then involved in such business. The fact is that no one cared to buy farm produce outright from distant shippers because of the risks involved. The only kind of business which then attracted men was that of an agent who could command a commission in proportion to the amount of produce handled without incurring at the same time any liability regarding the quality or safety of the product. This meant that all risks involved had to be borne by the local shipper.

An explanation of the factors contributing to those early risks requires the enumeration of a number of hazards. In the first place, the physical condition of the produce as it left the various farms was a matter of great uncertainty. Farmers had only the vaguest knowledge as to the demands of the market and would mingle produce of various grades and of various stages of ripeness or unripeness. The method of packing was equally unsystematic. The country merchant added poor handling and additional delay to the movement of the produce while the train equipment and slow movement of freight generally rendered extremely doubtful the quality of that portion of the produce which eventually reached the primary market.

Then, too, there were grave moral hazards as well. Any one familiar with this line of work could not fail to be impressed with the general lack of a sense of business integrity on the part of both the producer and the local shipper. Assurance might be given of the shipment of produce of high grade quality while the distinguishing characteristic of the returns would be oftentimes an utter lack of such quality.

The lack of a moral business sense on the part of the producer or local shipper was not only equalled but greatly exceeded by that of the average commission man handling the produce in the primary markets. However, it is only as we realize the peculiar position he occupied, that we can appreciate the practices usually attributed to him.

The commission man was far enough away from his principal to feel reasonably free from surveillance of any sort. He could report account sales on initial shipments so as to indicate big returns and having thus gained the confidence of shippers for further business, juggle the returns on large consignments to his own pecuniary advantage. It would naturally be his endeavor to handle as big a volume of produce as possible regardless of the care given to it in as much as his own income varied with the amount of the traffic. There was similarly an inducement for him to spread his own margin of gain beyond the nominal rate of commission by reporting the sale of produce at grades lower than those actually secured or by reporting sales at current prices when actual receipts involved an additional premium.

Such a system placed the local shippers at a grave disadvantage, of course. They were represented at a distance by men whom they did not know and in transactions they could not scrutinize. Fortunately for them another avenue through the primary markets eventually opened up. This came with the advent of the jobber.

It was, however, only after changes had made possible the movement of produce with care and dispatch between local sources of supply and the central distributing points that the jobber was induced to enter the field and buy outright. Previously, the extent of the risk involved had rendered it seemingly impracticable to open up a jobbers' avenue of trade through the primary market.

The earliest attempts at buying produce outright from primary markets were made by men who actually entered the local sources of supply and made purchases from local shippers. These field men would handle a variety of produce, some for purchase and some for sale.

Because of the limited amount of each kind of produce handled it was necessary to distribute the field-man's expenses over a variety of both purchases and sales in order to carry on the business successfully. Only after a personal knowledge of the character of the local

shipper had been gained and after the produce itself had been standardized so as to be identified with well-known grades, could the buying through field-men be supplemented by purchases through mailed quotations or through calls by telephone or telegraph. Even then, however, the use of actual field service continued to be employed in order to secure or hold trade in competition with other agencies in the same line of business. The specialized form of field work where men devote their buying to some single product, as in the case of the modern strawberry man, is a comparatively recent development and is limited to products subject to a high degree of localization and specialization.

In another respect, too, from the standpoint of the local shipper, the jobber's avenue of trade presented an important contrast to the older route, that via the commission man. Instead of the assumption of risks incident to consignments on commission the local shipper naturally preferred the security of actual sales. The result was a gradual displacement of commission business by that of jobbing wherever the latter found conditions for buying suitable. This change took place partly by the entry of new men into the jobbing field but often by a change in methods of doing business from commission to that of jobbing.

While a considerable number of produce men who began buying on a commission basis took up jobbing later, it was not uncommon to find a combination of both methods employed by the same firm. Dealers might handle certain lines on commission and buy other produce outright. Again a given commodity might be bought and sold in job lots at certain times and be taken in only on a commission basis later under different conditions. Such combinations of commission and jobbing business are still a common practice in all our leading trade centers.

The most important influence directing changes between the commission and jobbing methods of doing business is the movement of prices. Thus, during a period of uniform or rising prices, the jobbing business is encouraged whereas the conditions of oversupply leading to falling prices so far increase risks as to discourage jobbing and induce the dealer to accept shipments only on a commission basis.

Nevertheless, jobbing has so far become established now in the produce business as to make it the rule and commission buying the

exception in the handling of perishable products at our leading primary markets. The extent to which the jobber has displaced the commission man is more noticeable in Chicago and the twin cities than it is in New York City. The main explanation for this will be appreciated more fully after we have discussed the problems connected with the handling of surplus stock. At this time it is sufficient to state that the mere size of the New York market, enabling it to absorb large shipments at a relatively small change in prices, makes it seem the least risky place to consign produce that must be sent on commission. It should also be noted that where jobbing and commission business exist side by side in the same market, the latter is now practically confined to the lower grades of produce.

Not only has jobbing increased as compared with commission business, but competition among jobbers in the buying field has become very keen and has led to peculiar developments along certain lines. Thus, in the case of butter, we have an interesting situation revealed in connection with the practices of the recent butter board at Elgin. The tendency of that board to publish prices below those at which sales were actually made naturally aroused the indignation of the public. Nevertheless, the exact reason for such a procedure can only be understood in connection with the buying practices of the jobbing houses. Competition in securing or holding trade from local shippers had gradually led jobbers to offer premiums in the purchase of butter, such premiums to consist of a given margin above the Elgin quotations. The thought of getting a premium above market prices was, of course, attractive to local creameries, since it enabled them to make a good showing on the quality of the butter. To the extent that the same jobbers could have the market quotations as determined upon by their own board at Elgin appear lower than actual sales warranted, the offering of premiums was an easy matter. However, after action was later taken by the courts against the practice of the butter board, leading to a dropping of official quotations and to the publication of actual sales on the street, the practice of offering local shippers an apparent bonus over the market price has had to be modified accordingly.

Thus far our discussion of jobbing has centered mainly on the relation of the jobber to the source of supply. Attention will now be given more particularly to the selling activity of the jobber.

Two sets of problems confront these middleman agencies in the

sale of their produce: (1) the disposition of regular supplies through a more or less well-developed trade and (2) the unloading of additional amounts of produce at times of a surplus.

To meet the demands of regular buyers it is oftentimes necessary to work over the produce in order to put it in a condition that will appeal to the trade. It is also necessary to deliver the goods in the desired amount at the time and place it is wanted.

Relatively little attention was given by commission men twenty or thirty years ago to the work of sorting and repacking produce. The tendency was to pass it on to city retailers in much the same condition it was received by the commission man. This meant that the retail agencies were called upon to do whatever sorting or packing was demanded by the consumer.

In order to get the trade of the city retail agencies and to take advantage of the better prices which go with standardized goods, the jobbers soon took up the work of sorting and repacking. Whenever a gradual improvement has taken place in the quality of shipments from sources of supply the margin of gain from this kind of work necessarily becomes less. The amount of work of this kind, however, which still must be done on produce as it passes through the hands of jobbers, represents an appreciable part of the cost to the consumer. Any attempt to explain the middleman's margin must not overlook the items of cost arising in this way.

When the jobber sells to retail agencies he must also deliver the produce in desired amounts and at the time and the place it is wanted. Accordingly such jobbers must be equipped with a suitable delivery service. Here, again, competition between jobbers has involved a comparative test in the quality of service rendered. The horse and wagon were the usual equipment for many years but have rapidly been displaced by the motor-truck. The use of the latter by certain firms practically compels its use by all the competitors. One of the most sweeping changes in recent years among wholesale and jobbing houses at the various primary markets is that of the displacement of the horse and wagon by the motor-truck.

The jobber's task of disposing of surplus stock introduces a number of problems. He must find a way of unloading certain supplies within his own primary market because the condition of the produce will not permit its movement to other centers of trade. On the other hand, wherever a given primary market is overstocked as

compared with others, he directs his shipments so as to equalize conditions of supply in the distributing centers so far as such movement is practicable. Let us first consider the situation within a given primary market.

The demand from jobbers through the regular retail agencies varies considerably. This may be due to the uncertain manner in which the retailer distributes his wholesale orders. More generally it is due to the variations in purchases from retail stock by the consumer. Only one illustration of the latter is sufficient to emphasize this. If the weather is attractive and housewives venture forth in large numbers so as to see the produce for sale at the various retail agencies, the latter can count on an unusually heavy demand for such goods. On the other hand, if weather conditions suddenly become unfavorable thus tending to keep a great many customers at home, much less than even the ordinary demand is reflected in the sales of the retailer. While such a reaction on the business of any retailer may not seem of very great moment, the combined effect of such variations in all the retail agencies drawing on the supplies of a given jobbing firm means considerable variation in the business of the latter agency. This shows one way in which the problem of unloading a surplus is presented to the jobber.

Then again, the sources of supply are even still more the source of variability. This is partly explained in the relative instability of business practices by local shippers in handling produce and partly due to the seasonal variation in production itself at sources within reach of the jobber's trade.

The variations thus noted both in demand and supply show the need of some outlet for surplus stock. Assuming shipments to other primary markets impracticable, the jobber may partly satisfy this need by exchanges with other jobbers in his own center of trade. He may also unload on certain agencies other than the regularly established retail stores.

Formerly, the street peddler served the latter purpose to a large extent. By bringing his goods out into the consumers' territory it was possible to create a demand for produce beyond what would have been effective through the retail stores alone. At the same time, it is true that the peddler's business consisted partly in a displacement of the retailer's trade.

One of the noticeable changes in the city distributive machinery,

especially during the past decade, is a remarkable falling off in peddlers' business as it relates to the handling of produce. This change is doubtless due mainly to modifications in the wants of consumers themselves. The housewife who once was alert to the traffic of the street-vendor has largely become oblivious to his movements either because the exposure or quality of the peddlers' wares no longer appeals to her or because the orders by telephone or through the retailer's delivery service seem more in keeping with her social status.

With the passing of the produce peddler, the unloading of surplus stock by jobbers has had to be augmented in other ways. No doubt the advent of the chain stores and the produce branch of department stores has aided in this while, at the same time, increasing the regular trade. Moreover, the growing practice among the retail stores themselves of using their delivery service in soliciting orders and in calling especial attention to stocks they are anxious to move promptly has greatly increased the elasticity in demand placed upon jobbers by the retail trade.

Thus far the problem of unloading a surplus within a given primary market has assumed a high degree of perishability in the produce making necessary its immediate movement into the field of consumption. As a matter of fact, the most important development in the handling of produce during the last three decades has come through improvements in the art of refrigeration and a consequent lengthening of the period that perishable products may be held in the channels of distribution before going to the consumer. Moreover, such storing of foodstuffs has furnished the most effective means of solving the problem connected with the handling of the surplus.

It is natural therefore that jobbers should be actively interested in the progress of refrigeration as applied to products they handle. Anyone present at the sessions of the International Congress on Refrigeration held in Chicago in September, 1913, could not fail to observe the interest taken by jobbers in the deliberations of that body. Among the most intelligent questions asked regarding the technique of refrigeration processes or regarding the proper physical and chemical condition of produce to be placed in refrigeration were those from men actively engaged in the jobbing business.

For most of the fruits and vegetables handled by jobbers, the season of production in the source of supply is but a minor fraction

of the period of time during which jobbers are called upon to supply the same to the retail trade. Holding goods in cold storage has thus become a necessary part of their business. It means that they must render available during seasons of scarcity the amounts of produce sufficient to meet the consumers' demands and for this purpose they must anticipate prospective needs during periods of plenty and build up reserves accordingly. To do so successfully they must be able to unload later at an advance in price sufficient to cover additional costs for rent, interest and insurance as well as a margin of return for the risks incurred.

The risk feature becomes magnified when we remember the large number of agencies storing produce independently with only a vague knowledge of the actual supply held over for the future market. Not only is the amount in storage unknown but the various contingencies affecting the time and amount of additional future supplies are always a matter of grave uncertainty. The last-named difficulty was clearly exemplified during the winter of 1913 in connection with the storage of eggs. Unusually mild weather early in the winter had suddenly augmented fresh supplies rendering exceedingly problematical the unloading of storage eggs whose supply under normal conditions would not have been excessive. Although jobbers began to cut prices relying on elasticity of demand to remove the stored goods with sufficient dispatch, the retail agencies were more tardy in reducing their figures because of an unwillingness to sell at a loss. This explains why certain jobbers were ready to make terms with other avenues of sale such as that created by women's clubs in some of our leading markets.

Where jobbers dispose of their surplus by placing it in cold storage they are confronted with the need of setting aside the amount of capital represented by the stored goods. Few jobbers command the necessary money without resorting to borrowing. The usual course in this connection has been a resort to loans at the banks. However the rise of large storage companies with superior facilities for credit has introduced important changes in this respect.

Jobbers in the leading primary markets now often secure loans directly from storage firms who in turn arrange loans at lower rates with the banks. Similarly, in securing the protection of insurance on the stored goods, jobbers find it advantageous to get their insurance from the same storage firm which is enabled to take out at less

cost with an insurance company a large and long-time blanket policy sufficient to cover all the policy risks assumed for jobbers.

The discussion thus far has concerned the handling of a surplus more or less restricted in its use to a given primary market. However, the application of modern means of refrigeration to the handling of produce in transit has greatly facilitated the movement of such surplus stock between the various primary markets as well until we now have nearly a nation-wide movement of most of our fruits and vegetables.

This wider movement of surplus stock cannot be undertaken by jobbers without the use of facilities involving great increase in expense. It is necessary to know from day to day the supply conditions of each of the primary markets and this alone involves an outlay for telephone and telegraph expenses, the fixed charge of which it is impracticable to incur unless the jobber conducts his shipments between the primary markets on a sufficiently large scale. Then, too, this wider movement necessitates a knowledge of freight schedules and rates and of commercial practices that do not concern the dealer who limits his attention to a given trade center.

Our discussion has revealed the complexity of services devolving upon the middleman agencies in our modern distributive system. If the cost is to be reduced, such services must either be partly or wholly eliminated through changes in the wants of consumers or they must be rendered more efficiently either through other agencies or through some regulation of existing agencies.

Instead of passing produce through so many hands on its way from the producer to the consumer, some believe that a more direct route could be devised. It is generally conceded that the individuals performing the aforesaid middleman functions have not revealed any conspicuous affluence in wealth. At the same time many have come to regard the machinery as too cumbersome and expensive. An actual increase in the use of direct shipments recently from local sources of supply to the retail agencies in the cities and even to the consumers themselves has invited added interest in the possibility of a further extension of direct shipments.

The use of direct shipments implies, however, that the produce in question is graded according to quality so that it can be designated and bargained for without previous inspection. This means that the functions of sorting and packing as they are performed by job-

bers or city merchants must be undertaken and carried out in a satisfactory way by producers or local shippers.

Direct shipment also implies that information is at hand so that buyers and sellers of a given kind of produce may be able to find each other and agree upon conditions of sale. In order to render information available so as to bring buyers and sellers together, some states such as Kansas and South Carolina have appointed state officials who are expected to act as clearing houses of information for this purpose. Generally, however, the producer or local shipper is left to build up his own direct trade in the cities by furnishing such quality and service as to command a special demand for his produce or the city retailer must find such local shippers. However, the building up of such trade also implies that the necessary confidence exists between the buyer and seller in matters pertaining to the sale.

Again, direct shipment implies the availability of suitable and practicable shipping facilities. The present system of differential freight rates giving special rates in carload shipments is financially profitable from the standpoint of railway economy and is favorable to the indirect jobbing method of handling produce. On the other hand, the relatively high level of express charges has not given encouragement to any appreciable amount of direct shipment of produce. The most momentous change recently in this direction is the extension of the parcels post. Already there has been a rapid increase in the movement of parcels on terms such as to greatly facilitate the direct shipment of produce.

However, having given all the above mentioned requirements, direct shipment also implies a willingness on the part of both seller and buyer to give attention to all the necessary details of such a system. This assumes vastly more than the great body of either producers or consumers have shown themselves willing to undertake. While, therefore, we may doubtless look for a noticeable extension in the use of direct shipments, such extension is not likely to be carried beyond a minor fraction of the business as a whole.

An important reason for such limitations lies in the fact that the direct method of shipment has not as yet dealt successfully with the problem of handling surplus stock. On the other hand, the very agencies using the direct method of shipment have had to resort to the use of the indirect jobbing or commission system in dealing with a surplus.

While shipments direct from producers to consumers are likely to continue to cover a minor fraction of the total trade, the usefulness of such a system is not limited to the portion thus handled. A most important influence will be exerted in a sort of a regulative way on the methods of jobbers and commission men. In other words, the danger of a control of the supply by middlemen will be greatly minimized through the potential competition of a direct method of shipment.

While the limitations of the system of direct shipments have thus been discussed in order to indicate more clearly the relation of jobbers and commission men to the handling of produce, it is interesting to notice how the organization of certain producers themselves for marketing purposes has enabled them to do a part of their own jobbing. The most notable example of this kind is that of the citrus fruit growers. Even these, however, with their highly perfected form of organization find it necessary to make use of the existing middleman machinery at the various primary markets.

Finally, assuming the limitations of the direct method of shipments including that of the extension of producers' and consumers' organizations, will the commission and jobbing agencies render efficient service without any other checks than those of active and potential competition? That something more is necessary is implied to the extent that public regulation has been applied to the business of these middlemen. Such regulation has been applied in two ways. In the case of the commission business, state regulation has been provided in some instances as in Minnesota and New York compelling commission merchants to be licensed and bonded and subjecting their accounts to inspection by state officials in case of complaint from local shippers. The problem suggested in this connection is whether it is desirable and practicable to extend the regulation of commission business so that the accounts of such firms are inspected regularly in some such manner as that applied to banking institutions. The same problem arises in connection with the storing of surplus stock by jobbing or other agencies. In the latter case, the public interest is affected not only by the possibility of abuses such as the misrepresentation of storage goods as if they were fresh, but also by the extent to which a concentration of surplus stock may lead to a control of the supply.

WHOLESALE CITY DISTRIBUTION OF FARM PRODUCTS

BY FRANK G. URNER,

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I have been urged by the editor of *THE ANNALS* to discuss the function of the produce commission merchant. It will be impossible to do more than scratch the surface of the subject. The commission merchant is, in many lines, becoming so amalgamated with other classes of distributors that he must be considered in relation to the whole system of distribution. So I have changed the title and shall endeavor in as few words as possible, to set forth some of the facts, feeling that no adequate discussion can be given in so brief a paper.

The directness of movement of farm products to consumers depends largely upon the location of the consumers in relation to the sources of an adequate supply. Farmers can market a small part of their productions directly to consumers in their immediate neighborhood, and through only one intermediate agency in nearby towns. But the great centers of population must draw their supplies from great distances and the distribution here involves the necessary services of a larger number of agencies although in the development of modern business systems these may be more or less combined under a central head and management.

The number of agencies required in the city distribution of farm products depends upon the magnitude of the population, the diversity of its wants as to qualities and service, and the degree to which the system of distribution is developed; also upon the character of the various products.

In a great city, drawing its supplies from a territory as wide as the nation, and from foreign countries, individual dealing in small quantities between producers and consumers is manifestly impossible as an economic proposition applying to the general supply and demand. For economical transportation the products must be, as a rule, shipped in car lots, often under refrigeration. In some instances this may be done by the producer but many articles are raised in smaller quantity and must be amalgamated and prepared for shipment by separate business enterprise. Upon arrival in the great cen-

ters of consumption consignments must, as a rule, be divided into smaller quantities as needed by retail distributors and separated into different grades so that each may be directed to an appropriate channel of outlet. There is manifestly a need here for a class of wholesale receivers and the directness with which the products can pass from them to the retailer depends largely upon the character of the goods, the manner of packing and the reliability as to uniform quality. Retailers ordinarily buy a great variety of kinds of produce but comparatively small quantities of each at a time, owing to their perishability; and they demand uniformity of quality so far as it is possible to obtain it, in order to satisfy their customers. Retailers can and do buy some articles of farm produce from the first hand receivers or importers but the greater part of the city supply of most descriptions is of irregular quality and requires to be rehandled and graded in order to make it acceptable to retailers. To do this is the function of the wholesale jobber. We have, therefore, three agencies of city distribution, considering the great bulk of the farm products going into city consumption—the wholesale receiver, the jobber, and the retailer.

Primarily, as the cities grew to a magnitude demanding these agencies, the lines of demarkation between them were quite distinct, and of the wholesale receivers, especially those engaged in the receipt and sale of domestic productions, most were commission merchants, acting solely as agents for producers or shippers who bought from the latter at interior points. Thirty years ago most of the wholesale receiving houses handled the great majority of the farm products in a purely agential capacity and the charge for selling wholesale lots to jobbers, in town or out, was usually 10 per cent for fruit and vegetables and 5 per cent for butter, cheese, eggs and poultry.

As the years have passed, however, changes have occurred in the character of the business done by a large part of the wholesale distributors, under the stress of a normal competition which constantly tends to grind out of the distributing machinery all unnecessary factors. Under this competition the lines of demarkation between wholesale receivers and jobbers have become indefinite and are tending toward obliteration in respect to all goods so graded and packed at primary points as to satisfy the demands of dealers nearer to the point of consumption. Jobbers, in the effort to obtain supplies more cheaply, have reached out to primary sources of supply, over the heads of the wholesale receivers; and the latter, in order to maintain their

hold upon supplies, have reached out over the heads of jobbers for outlets to retailers, so that the two classes of trade, formerly distinct, have tended toward a unification. But in respect to a large part of the farm products, especially such as are of the most perishable nature, this more direct movement has not yet become possible, and at the present time we find in the large markets not only commission merchants and jobbers but also many wholesalers who perform both functions, and many who besides acting as agents for some producers and shippers deal also in the products for their own account.

There is, of course, a material difference in the principle of business involved in the commission and jobbing trades. The former is based upon agency, the merchant handling the property of other owners and deriving his recompense from a definite percentage charge against the proceeds of his sales; the latter is a merchandising proposition in which the goods dealt in are bought and sold, the recompense being derived from such profit as may be obtainable. Theoretically the two forms of distribution are not compatible in a single house for the value of an agent's services to his patrons is lessened by the personal interest that arises from his dealings, for his own account, as owner, in the same class of goods. But the wholesale distributing trade is now in this somewhat anomalous condition. Wholesale jobbers, whose normal function is to buy, assort and sell in broken lots, when drawing supplies from primary sources, widely scattered and often distant, are often obliged to resort to some means of settling values on consignments other than the separate negotiation as to the price terms usually normal to purchase and sale; and commission merchants, under the stress of competition with more direct outlets, and a gradual reduction in the charges for purely agential services, have come to depend at least partially upon the profits to be realized from merchandising. Purchase and sale for own account on the part of nominal commission merchants have also been encouraged by the demands of producers and shippers for immediate returns and the competition to render such returns in many cases before the goods could be sold.

The change from a purely agential handling of farm products by first hand receivers to a merchandising system, or to a mixed system in which goods are handled both on commission and for own account, has doubtless been favored also by the development of cold storage preservation; for the speculative element inherent in this

business, while open to all, is most naturally undertaken by handlers who are best fitted through the broadness of their connections and experience to judge of market conditions and the relation of current to prospective values.

While the mixture of agential and merchandising business in wholesale, first hand distribution is theoretically unsound it seems to be an inevitable accompaniment of the gradual progress toward the more direct movement of products from producer to consumer, in the final development of which the agency feature is likely ultimately to disappear, or to be confined to the most perishable commodities in which two wholesale classes of distributors may continue essential.

It is probably a safe conclusion that the number of distributing agencies cannot be lessened any faster, nor to any greater extent, than is naturally being done through the forces of business competition; and that such possible elimination is limited by the amalgamation of the wholesale receiving and jobbing trades which is already largely effected and which is being extended as to products of the less perishable nature as rapidly as improvements in their uniformity of quality permit.

Furthermore, while there must always be a wholesale distributing agency in large cities between the producer or shipper and the retailer, there is opportunity for the performance of all the distributive functions between wholesale receipt and sales to consumers—even of all between producers and consumers—by single generalized establishments, either proprietary or coöperative. The opportunity for this important development has not lain fallow but has been largely put into effect in business enterprises that are constantly being extended, and in which all the necessary distributive functions are performed, including the collection of products from producers at widely separated points, the preparation for shipment, the wholesale receipt in centers of congested population, the separation into uniform grades and the final distribution in small lots to consumers through chains of retail stores. Such establishments have an economic advantage under efficient systemization and management which redounds to the advantage of consumers and producers as soon as they become numerous enough to create an equality of competition and so long as such competition is maintained.

So far this development of complete amalgamation of distributive functions has been carried the furthest in the less perishable

kinds of farm products, or those whose preservation has been extended by the use of refrigeration. There would seem, however, to be opportunity for further development of similar character in the distribution of even the more perishable productions. But however the growing hand of business enterprise may grasp the various functions of distribution and combine them under a central management, the wholesale receipt and classification and the retail distribution must remain as distinct departments of such enterprises, and, because of the great magnitude of the traffic, it will doubtless be long before individual business efforts, specialized in either department, will cease to be profitable under careful management. The wholesale commission merchant, also, will continue to perform a useful and necessary function so long as large quantities of farm products reach the market in widely irregular quality and condition, so as to require variable channels of outlet.

THE COST OF DISTRIBUTING GROCERIES

By E. M. PATTERSON, PH.D.,

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Current discussions of the cost of living and experiments in reducing it find the position of the retail grocer very strong. There is a demand for his services and no plan that involves his complete elimination can succeed. Mail order houses and factories selling direct to the consumer have taken a part of his trade but thus far they are able to do nothing more than lessen his business. They are not able completely to displace him. Coöperative stores and the chain store are merely modifications of the retail store and not at all a substitute for it.

The reason is to be found in the nature of the demand for the grocer's services. The housewife lacks a large store room and so must buy in small quantities rather than in bulk. A limited supply of cash makes impossible large purchases from a distant point. Vegetables and fruits must be fresh, while many articles are not sufficiently standardized to be purchased without examination. Unexpected guests and other emergencies create demands that must be promptly met. A lack of foresight in buying makes a local supply a convenience if not an actual necessity. These reasons and others seem to insure a steady, continued demand for the retail grocer.

This demand, however, is merely a demand for a local supply of groceries, vegetables and fruit and not a demand for highly skilled service. A grocery store offers the opportunity for a very high degree of efficiency. Care in purchasing only the goods for which there is a demand and in the proper quantities, skill and tact in securing and retaining customers and discrimination in the extension of credit call for business foresight and ability. Yet it is possible to conduct a grocery store with very little capital and with no experience. Two hundred dollars will purchase a fair stock of goods, while an even smaller sum may be invested in a few groceries to be carried as a side line in connection with a meat shop or a delicatessen store. Lack of experience may be a handicap but it does not debar any one from starting business.

As a result the retail grocery field is highly competitive. Entrance is easy. Although customers may be few and profits nil, the store may continue for a considerable period. The wife or the children may wait upon the customers while the husband and father works elsewhere at his trade. Little is invested and little is lost in case of failure. Some of the stock is not quickly perishable and may, in case of need, be consumed by the grocer's family, or perhaps sold to fair advantage if creditors press their demands.

The grocer who is entirely dependent upon his store is thus forced into severe competition. The profit on each article sold is small and it is easy for him to be drawn into price cutting. Demand for many articles is hard to determine, and the end of the season will find the careless buyer with his shelves full of goods that must be carried into the next year. While many of the commodities handled are not readily perishable, fresh fruits and vegetables are an important and expensive exception. Items of direct expenditure bulk large. Clerks, order boys and delivery boys must be paid. Small orders must be delivered at a distance to avoid offending customers. Trading stamps and other kinds of premiums must perhaps be used to attract trade. Petty thieving and carelessness among employees are hard to detect and very difficult of correction. Credit must be extended to customers with frequent heavy losses and always a temporary employment of capital in an unprofitable manner. Trade varies so widely from hour to hour and from day to day that it is hard to keep employees working regularly.

All this emphasizes the necessity of careful management. It is estimated that the grocer must make from 15 per cent to 20 per cent gross profit in handling his goods and that "any one whose expenses do not run over 17½ per cent has cause to congratulate himself." But this margin of gross profit is hard to secure.¹

Butter and eggs together are said to represent about 36 per cent of the grocer's total sales and yield about 10 per cent profit. Sugar

¹ A prominent grocer from the Pacific coast not long ago declared: "On the coast we handle no meats—only groceries and some liquor in sealed packages Sixty per cent of our business pays only from 10 per cent to 12 per cent while the majority need 17 per cent. In most cases there is a large loss, i.e. from 5 per cent to 8 per cent, hence a large profit must be added to other goods. We practically rob customers on teas and coffees to make up the balance." (*Grocers' Review*, July, 1910, p. 246.)

represents 7 per cent and always sells on a very narrow margin. Flour yields 16 per cent profit, but ham, bacon and lard less than 5 per cent. Eggs, butter, sugar, smoked meats, lard, bread, flour and potatoes represent about 60 per cent of the total sales and show the retailer an average gross profit of only about 9 per cent. Evidently a large profit must be derived from other lines of goods if the grocer is to survive.²

With this narrow margin of gain a frequent turn-over of invested capital is necessary and the ideal kept in mind is an entire change of stock once each month or twelve times per year. Needless to say this ideal is seldom attained. Careful, intelligent grocers with fair credit can and do make good profits if conditions are at all favorable but it is evident that many who are easily drawn into the trade may lack these qualities and find the pressure of competition very keen. For the independent dealer the problem has in recent years been complicated by the appearance of the chain stores—a number of stores under a single management from a central office. The economies gained from such concentration give them a distinct advantage and their competition is one of the most serious obstacles the independent grocer must face.

The result of the conditions just cited may be illustrated by the situation in Philadelphia. In 1911 there were in the city 5,266 retail grocery stores besides 257 delicatessen stores that sell some groceries and 2,004 butchers and retail meat dealers, of whom probably 10 per cent or 200 also sold groceries. A total of these three groups gives 5,723 but does not include a large number of stores dealing in a variety of articles and hence hard to classify. Some of these also compete with the regular grocers. If we limit the discussion, however, to the 5,723 stores named, a comparison with the population of the city which was 1,549,008 in 1910, shows one store for every 270 people or one for every 54 families. Or if only the 5,266 stores are included there is one store for every 294 people or one for every 59 families.

The grocery business is carried on in several ways. By far the larger part is conducted by the independent proprietor who purchases most of his dry groceries from the wholesaler and his vegetables and

² These estimates have been furnished to the writer by Secretary Reno Schoch of the Retail Grocers' Association of Philadelphia, who with the other officers of the Association has been very courteous and helpful in giving assistance.

fruit from the commission merchant. A second group is the chain-stores. Each system of these stores is managed from a central office and goods are purchased from a wholesale firm perhaps separately incorporated but in any case owned and operated by the same interests as the retail stores. They thus have several advantages. They sell for cash, eliminating losses from bad debts and securing a quick turnover of capital and the benefit of cash discounts on their own purchases. They buy in large quantities from the wholesaler or direct from the manufacturer, thus getting quantity prices. A very high degree of efficiency in operation is brought about by the employment of high grade managers at the central office.

A third group is made up of those independent grocers who have organized into associations to promote their common interests. In addition to the ordinary activities of trade bodies they have in recent years been carrying on a sharp contest with the jobbers and with the chain stores.

This somewhat lengthy description justifies the assertion that the ordinary method of distributing groceries is expensive both to the grocer and to the general public. The goods pass from the manufacturer through the hands of the wholesaler who adds 10 per cent to the price, and then to the retailer who adds an additional 20 per cent before they reach the consumer. The 20 per cent profit of the retailers is not sufficient for those who are hopelessly incompetent, but is more than would be necessary under a more efficient régime. The buying public is paying a price that is fixed by the needs of what the technical economist would call the "marginal grocer" whose ability is small. He exists because of the demand for his services and because of the ease of entering the business as described above. To these reasons for the expense of grocery distribution are to be added careless purchases by the housewife, the cost of an elaborate order and delivery service, the burden of trading stamps and premiums and numerous other items that need not be enumerated in detail.

The present period of rising prices has subjected the grocer and other retailers to a heavy pressure. They are compelled to pay more for their purchases but find great difficulty in raising their prices to the consumers. Profits are thus lessened and many have failed. The rest are seeking for a solution of the problem that will lessen their burdens and are finding that solution in several different forms.

To understand the situation it is necessary to observe some of

the forces that tend to perpetuate the present system of distribution. Manufacturers, wholesalers and retailers have from time to time shown their approval of it, contending that its continuance is for the advantage of all parties concerned. A few illustrations of this attitude will make the point clear. On April 6 and 7, 1909, there was held in New York City a conference attended by representatives of the American Specialty Manufacturers' Association, the National Wholesale Grocers' Association and the National Retail Grocers' Association. At this meeting a resolution was passed that the specialty manufacturers should fix the price to the consumer but that the prices should not be placed by the manufacturers on the package. Another action taken was the following:

Resolved, That it is the sense of this conference that we are opposed to the factory-to-family plan, because it is a trade demoralizer and, in itself, is degrading.

That the conferees representing various interests here acquaint their members with the dangers of this movement and that they urge them to instruct their employees to do what they can to educate the public as to the fallacy of the theory that the factory-to-family plan means an economy to the family, and that the regular channel of distribution is from the retailer to the consumer, that the same is the most economical means of delivering goods to the consumer; and is in that manner a protection to the consumer.

In the same year the A. & W. Thum Company, manufacturers of "tanglefoot" fly paper decided to supply "only such of the wholesale trade as maintain the manufacturers' fixed selling price;" also the N. K. Fairbank Company began to paste on each package of its product a sticker specifying that the goods were sold only on condition that they were retailed at no less than specified prices, and declaring both wholesaler and retailer liable to the N. K. Fairbank Company to the amount of \$50 for each breach of this condition not as a penalty but as liquidated damages, a method generally known as the "Pacific Coast Plan." The Kellogg Toasted Corn Flake Company has a similar plan, selling only to wholesalers and endeavoring to maintain a uniform retail price of ten cents a package.

This attitude against price cutting has also received support in the action of the New Jersey legislature which at its last session passed a bill entitled "A bill to prevent unfair competition." This bill which became a law with the governor's signature definitely forbids discriminating against the goods of any manufacturer "by depre-

ciating the value of such products in the public mind, or by misrepresentation as to value or quality, or by price inducement, or by unfair discrimination between buyers, or in any other manner whatsoever, except in cases where said goods do not carry any notice prohibiting such practice and excepting in case of a receiver's sale or a sale by a concern going out of business."

The organization of the grocery business as we have described it is thus strongly defended. Its two aspects that affect the cost of goods to the consumer are (1) the distribution of goods only through both the wholesaler and the retailer, and (2) the maintenance, if possible, of a retail price determined by the manufacturer. To this may be added the practice of offering trading stamps and premiums as trade inducements, but this is not such an essential part of the general system as the other two features.

An attack on these methods of distribution was inevitable. Too many parties with diverse interests are involved to make unanimity of action possible. Even the manufacturers, though relatively few in number, are difficult to hold together. The wholesalers are the ones most in danger in a reorganization and so are more easily controlled but the retailers are numerous and of diverse interests. A modification of methods of distribution is less apt to injure them and besides, many of them are not far-sighted enough to understand what may be for their own best interests.

The system is weakening in the two features mentioned. The first move has been toward the elimination so far as possible of the wholesaler as a distributive factor and the attack upon him has come in four different ways.

The first of these is the chain stores which have already been described. At first small in size and strength they grew until they became a serious menace to the independent retailer and finally to the jobber. The manufacturer found it profitable to pass over the jobber and sell his goods direct to the retail stores. Naturally enough the wholesaler protested but the influence of the chain stores was too great. The chain stores also organized as wholesale houses and claimed the same right as other wholesalers to buy direct from the manufacturer.

The second attack has come from the associations of independent retail dealers. By combining their orders they found it possible to take advantage of quantity prices in purchasing from the wholesaler.

This led to the next step which was purchase direct from the manufacturers. Again the wholesaler objected, but again he lost because of the strength of his opponents. In some cases, as in Philadelphia, the retailers' associations formed separate organizations which were incorporated to do a wholesale business but saved their profits for the retail grocers who owned all the stock. Ordinarily the wholesaler adds 10 per cent to the cost of the goods he handles. The chain stores and the retailers' associations can do the work for much less than one-half this and are the gainers by that amount.

It is to be noted that in neither of the cases just described does the consumer benefit except in so far as the retailer allows him to share in the savings effected. Retail prices may or may not be lowered. Also the manufacturers are clinging to the form of selling only to wholesalers since the chain stores and retailers' associations are so organized. Although this distinction is largely technical, it still exists and so long as it is observed one may urge that the system of distribution is still intact.

However that may be, even the outward form is beginning to disappear. Some manufacturers are offering to sell direct to the retailer—a third method of attacking the wholesaler. Thus the Proctor & Gamble Distributing Company which deals in the products of the Proctor & Gamble Company, have recently gone direct to the retail trade in Greater New York, Rockland and Westchester counties, New York, and all of New Jersey as far south as and including Trenton. They still furnish their products to jobbers in that territory but on the same basis as to the retail grocers.

A fourth attack is on quantity prices. Thus far the small dealer has been handicapped in his struggles by the fact that the wholesalers, the chain stores, the retailers' associations and the large independent dealers have been able to purchase at a lower price because buying in large quantities. A determined effort is being made now to check this practice. Among the manufacturers who have already abandoned the plan is the American Tobacco Company, which, however, sells only to the wholesalers. The result of the contest will probably not be the entire elimination of the wholesaler, but merely a lessening of his importance. He will doubtless retain his position but will handle a smaller proportion of the total supply of groceries than in the past.

A movement has also been directed against the fixing of retail

prices by the manufacturer. Much can be said in favor of the practice as a protection to the wholesaler, the retailer and the consumer as well as to the manufacturer. The manufacturer contends that his goods will be energetically handled by the wholesaler and retailer only in case there is a fair margin of profit to be realized. If prices are cut by one dealer the others must follow and all lose. On the other hand if a fixed price could be maintained there would be a fair profit for all. The consumer also would gain. Prices would be certain instead of irregular and he would not be compelled to pay more for other goods to offset the grocer's losses on goods whose prices had been cut.

Methods of maintaining prices have varied but the usual ones have been those described above as practiced by the N. K. Fairbank Company and others. The difficulty has been in controlling both wholesalers and retailers. The only way to coerce them has been to bring action for violation of contract or for liquidated damages. This has brought the whole matter before the courts who have been called upon to determine the legality of such agreements. The issue hinges upon the interpretation of the Sherman Anti-Trust Law and the statutes of the various states against agreements in restraint of trade.

Two classes of cases have arisen. The first involved the right of the manufacturer to dictate the retail selling price of articles not patented and was settled by the United States Supreme Court in *Dr. Miles Medical Co. v. John D. Park & Sons* (220 U.S. 373). The court held that while a manufacturer is not bound to make or sell goods this fact does not prove that he may impose every sort of restriction upon purchasers. Nor may he by rule or notice, in absence of contract or statutory right, fix prices for future sales, even though the restriction be known to purchasers. Any right that he has to project control beyond his own sales must depend, not upon an inherent power incident to production and original ownership, but upon agreement. But such agreements are injurious to the public interest and void. The plan, in effect, creates a combination for prohibited purposes. The complainant having sold its product at prices satisfactory to itself, the public is entitled to whatever advantages may be derived from competition in the subsequent traffic.

This case seems to have settled permanently the question for unpatented articles unless, as Justice Holmes pointed out in a dissenting opinion, the manufacturer should make the retail dealers his legal

distributing agents and retain title to the goods until sold. This might put the plan beyond successful attack, but would involve such an extensive reorganization of retail business methods as to make it an impracticable solution.

The second class of cases involves the right of the manufacturer of a patented article to determine its retail price. In *Sidney Henry et al. v. A. B. Dick Co.* (224 U. S. 1.) the court gave such a broad interpretation to the rights of a patentee that it seemed probable that the power of price control might be upheld in later decisions. But in the later case of *Bauer & Cie and the Bauer Chemical Company v. James O'Donnell* (often called the Sanatogen case) it was held that "a patentee who has parted with a patented machine by passing title to a purchaser has placed the article beyond the limits of the monopoly secured by the patent act."

Both of these decisions were rendered in cases involving medicines but in their application will affect the right of the manufacturer to fix the prices of groceries as well. At the time of this writing there is still before the federal courts the case of the Kellogg Toasted Corn Flake Company which is being prosecuted for violation of the Sherman Act by fixing the retail selling price of its product. The most important contention of the defense has been the fact that their product is packed in a carton which has a patented device attached. If the manufacturer were able to retain control over his patented product to the extent of determining its retail selling price the strength of the Kellogg defense would be apparent. Under the ruling in the Dick case cited above such a decision by the court seemed probable but in the Sanatogen case the court's attitude is clearer and at present it seems probable that the Kellogg suit will be decided in favor of the government.

There is thus going on a reorganization in the methods of distributing dry groceries. As in other fields, prophecy is unsafe, but it seems probable that uneconomical practices will be checked. Severe competition, especially in the present period of rising prices, will force many retailers out of the field. If distribution of groceries through both wholesaler and retailer is on the whole less wasteful than sale by the manufacturer direct to the consumer, the wholesaler will be retained. If not, he will be as far as possible eliminated. If fixing of prices by the manufacturer is more economical than price cutting we shall doubtless come back to that practice, but at present the tendency is in the other direction.

PUBLICITY AS A PREVENTIVE OF ABUSES BY THE RETAILER

BY MARTHA J. FULLER,

Chairman, Committee on Advertising, *Housewives League Magazine*, New York

All successful business men consider publicity an indispensable feature of their enterprises. In making appropriations for yearly expenditures, a large part of the amount set aside is designed for this purpose. A merchant prince who spends millions of dollars for publicity of one kind or another once said that a business house might as well take down its sign as to discontinue advertising. Such a house might have the best goods obtainable, the most efficient help, the most capable management, but if it did not keep these facts before the public its patronage would be small and it would be doomed to failure.

While the business man has thus been blazing abroad the things he wanted the consumer to know, or believe, the latter has been for the most part dumb. He has had no system of disseminating the facts which as a class he needed to know to safeguard his rights in dealing with the retailer. The knowledge of the individual consumer was not passed on to the others. Consumers are now learning to use the weapon of the business man, publicity, to protect themselves and are finding that it is much more efficient than the so-called strong arm of the law and an indispensable ally of the latter.

In direct proportion to the extent that home industries have been taken out of the home and commercialized has the business of defrauding the unsuspecting housewife flourished. Much of the best thought and energy of our time have been devoted to devising ways and means to fool her and to give just as little value as could be given without exciting her suspicion. This manifestly does not savor of the brotherhood of man and is a sad commentary upon the probity of the dispensers of the necessities of life. Under the circumstances, it was not strange that they should count on being able to fool all the people all the time, and so long as consumers had not learned to protect themselves by advertising these practices,

dishonest dealers became bolder and bolder in their business methods.

From the time of the production of any commodity destined for household use to the moment it reaches the ultimate consumer there are numerous intermediaries all of whom must make a profit, by fair means or foul. We shall here deal only with the retailer, at whose door justly can be laid much responsibility for the high cost of living. Here do we find, among other things, the use of short weights and measures, the weighing of hands, the charging for wooden butter and lard trays and wrapping paper at the prevailing market price of the contents; substitution, misrepresentation, unsanitary handling of food; the selling of cold storage products at the price of fresh, the keeping up of retail prices regardless of reduced wholesale prices, and the giving of prize money to clerks as a reward for selling goods above their actual value.

Year in and year out has the dispenser of the family funds made her daily purchases without knowing of these things, except as isolated cases of fraud were forced upon her attention, whereupon, if she did anything, she would seek some other dealer and submit to the old impositions.

Small things these might have been sometimes, but assumed calculable proportions during the year. In the case of butter, for instance, the short weight of two ounces a day, with butter at thirty cents a pound, means a loss of \$13.50 a year. At times, too, the amount represented is not so little. A New England housewife, after buying a set of scales, found that her butcher had been charging for eighteen pounds of roast beef, when he had delivered only thirteen. The same butcher had been delivering a similar roast to her and charging her for it at the same rate for years. With meat at its present price this assuredly was no trifle. She also found that she had been charged for three hundred pounds of ice a week when her icebox would not hold anything like that amount. Another housewife who had previously left the marketing to her steward found, upon investigation, that she had been spending two or three hundred dollars a month more than was necessary.

Now that the searchlight of publicity has been thrown upon these practices, through the national organization of housewives and other means, the tables have been turned and the trend is toward a square deal for the formerly helpless consumer. Armed with

knowledge she meets the retailer upon an equal footing, as one business man meets another. Familiar with her prerogatives, she insists upon receiving quid pro quo. She knows what she should pay for ice, eggs at different seasons, apples and all farm produce. She has her own scales and checks the dealers' weights. She insists upon clean shops and sanitary handling of food. She demands pure fabrics. She has, in short, cut the ground of her own ignorance from under the dishonest retailers' feet, and the resultant reduction in the family expenses is both surprising and gratifying.

Thus she has not only promoted her own interests and those of her family but those of the trade as well. There are many honest dealers and dealers who wish to be honest; but so long as the public did not know or care whether or not it was cheated, unfair competition tended to force the naturally honest to adopt the practices of the less scrupulous. Some, indeed, have maintained high standards in the face of extremely discouraging circumstances, and when housewives are sufficiently enlightened to place a premium upon honesty their kind will multiply, while those who cannot adapt themselves to the new conditions must be forced out of business. The well-informed consumer and the dishonest retailer are not co-existent.

EFFECT OF THE NEW JERSEY DEPARTMENT OF WEIGHTS AND MEASURES ON THE COST OF LIVING

BY WILLIAM L. WALDRON,

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The high cost of living is one of the most vital problems of the day. It is a subject of more than passing notice. One cannot glance through a newspaper or a magazine, it seems, without encountering some article touching on it. The theories and arguments presented, while carefully compiled, prepared and written, are as different as the writers themselves. No two writers reach the same conclusion. All are endeavoring to point out just how, in their estimation, the matter can be brought to a satisfactory adjustment. In most articles the arguments are good and I have no doubt but that they help some readers solve the problem. It is not my intention in this article to differ from any of the theories advanced. It is rather my privilege to write upon a phase seldom referred to, but of great import nevertheless. I refer now to the very important factor of getting full weight and full measure for money expended. The high cost of living problem has been viewed from every angle but that mentioned. In all likelihood this was an oversight, as any intelligent person will readily grant that getting full value, instead of half or three-quarters, will have an effect of some kind on the finances of the home.

Prices of foodstuffs have gone up by leaps and bounds. It was thought three or four years ago that the limit had been reached, but today we know how utterly false that opinion was. It is quite unnecessary to mention here what articles have increased in cost. The list would be too lengthy. All have soared and are still soaring. One reason for this increase, to my mind, lies in the fact that package goods have supplanted goods sold in bulk. The new method is more expensive to the merchant and consumer alike, but the latter, of course, pays more in the end. Another fact lost sight of nowadays is that many consumers order by telephone and never see the goods delivered. Still others purchase haphazardly, asking for "about two pounds" of steak, when it would be just as easy and

far more satisfactory to say "I want two pounds of steak." The dealer then would not be so prone to charge for overweight. This throws an entirely different light on the subject.

My advice to the purchasing public is to watch carefully the weight or measure of goods bought. The results will surprise them. A proprietor of one of Atlantic City's leading hotels complained to me that he was being systematically victimized and robbed by his help and by merchants with whom he dealt. He was at a loss as to what course to pursue to bring about a change for the better. I suggested that he employ one whom he could trust to weigh all goods coming into the hotel and to check up all supplies. He acted on the suggestion and in one year effected a saving of twenty-five thousand dollars. A letter he wrote a short time ago stated that the plan was working admirably. If the housewife were to put her household on the same basis many dollars would be saved, which do not purchase anything now. It is unreasonable to suppose the savings would be as great as the hotel proprietor's, but they would reach a snug figure. After all is said and done, much depends on the attitude and vigilance of the consumer. If every effort is made to insure getting full weight and full measure, we are proceeding in the right direction and will get what we are after; but if these important details are slighted, losses and drains, where they can least be afforded, may be looked for.

Hucksters Should Be Watched

Many hucksters are wary and need careful watching. Their season is a short one, the goods they sell are perishable and they have to work quickly to realize on the money they have invested. Not very long ago two were apprehended in one of the leading cities of the state for selling a barrel of potatoes, which was just a half-bushel short. Their apprehension was brought about by the vigilance of the housewife. She watched the barrel being emptied and saw, when all the potatoes were out, that it contained a basket turned upside down. This trick is a favorite with hucksters and produce men, but they escape detection by operating quickly out of range of the buyer. In the instance cited, both peddlers made all kinds of promises if the woman would release them, but their pleas fell on deaf ears. They were arrested, arraigned in court and

fined one hundred dollars each, as well as being sentenced to jail for thirty days. Who can deny that such characters have had an effect on the high cost of living? They had been operating in the city where they were caught for one week, so that they had easily cleared the amount of fines imposed. But the jail sentence hurt. It will go a long way towards making them avoid this state in future. They learned much in court of the activities of the weights and measures officials of this state.

Hucksters claim to sell cheaper, but the apparent reduction is made up by giving short weight and short measure. Their field in this state is not nearly so fruitful now as it used to be, as city and county weight and measure superintendents intercept them wherever found and compel them to show their measures. If the measures have been sealed they are allowed to continue their operations; but if the measures have not been passed upon they are tested without further delay. More than one huckster has had occasion to regret the visit of the weights and measures man, as any equipment in use found short of standard is at once confiscated. This constant picking up of equipment found incorrect has a tendency to insure correct weight and measure to patrons, as in every instance confiscated apparatus must be replaced with standard equipment that has been sealed.

Even where equipment has been tested and sealed, no guarantee can be given that the purchaser is getting all that is coming. This fact is established by the following case: An Italian merchant had been using the so-called "bottomless" measures, which have been placed under the ban in this state because they can be manipulated. As it was his first offense and as he pleaded ignorance of the law, he was not prosecuted, suffering only the loss of the measure. He was advised to purchase cylindrical measures, as they are more satisfactory in every way. He acted on the suggestion and the measures were sealed. Imagine the surprise of the official when he called on the merchant a few weeks later and found him using the sealed measures in which had been cunningly placed two false bottoms, one in each measure. They had been nailed and enabled the operator to work very freely. Of course he was arrested and fined. He will not be so ready in the future to tamper with sealed equipment. This incident emphasizes the need of being constantly vigilant, as other merchants besides Italians had availed themselves of the same trickery.

What Public Opinion Did to One Dishonest Merchant

That public opinion is being gradually aroused is borne out by the following instance: One of our county superintendents was inspecting in one of the smaller towns of his county. He called on the proprietor of one of the few stores in the town and tested the weights and measures used. All were found satisfactory save one dry measure, which was found to be short. This fact was pointed out to the merchant, who became very sarcastic and showed in other ways that he bitterly resented anyone's "prying in his business," as he termed it. He stated that he had always used this measure and never had anyone complain of it. The superintendent retorted that he could not continue using it, as it contained a false bottom. The merchant felt that he was being discriminated against unjustly and appealed to several customers who had entered the store during the altercation. He showed them the measure and his action produced an effect entirely different from that he had calculated on. Those who had been dealing with him stopped and told others. The result was that his business fell off to such an extent that he was forced to sell out and leave town. The various women's organizations take a keen interest in weights and measures work, and have rendered valuable aid in the past.

Keeping Coal Dealers in Line

The aim of the department's officials at all times is to secure full weight and measure. This fact is especially kept in mind during the fall and winter months when the selling of coal is at its height. One of the requirements of our law is for coal dealers to deliver tickets stating how much coal is being sold with each delivery. This feature was an innovation and was not very cordially received, as it requires that the net weight sold must be marked legibly on the ticket. This is a great help to the purchaser as he knows just how much coal he is getting for his money. Furthermore, it proves of assistance to the superintendents when they intercept coal deliveries. This is the plan followed to determine whether or not the merchants are complying with the law, both as regards delivery ticket and giving the weight the ticket calls for. In connection with this statement it might not be amiss to mention one delivery intercepted

during January of this year. A widow, with five children, only one of whom was old enough to work, had ordered a ton of coal from a dealer and had paid \$6.25 before the coal was delivered. An assistant state superintendent saw the coal being delivered and asked the driver to let him see the delivery ticket. It called for one ton. The load was driven to one of our testing stations and weighed. The coal was then delivered after which the wagon was weighed by itself. The inspector found that the coal was short six hundred pounds on the ton. The driver at once telephoned the dealer and told him he was about to be arrested. The dealer decided to destroy the scale on which the coal had been weighed and caused it to be chopped into small pieces, hoping in this way to escape the consequences of his act. This, however, did not prevent a warrant being sworn out for his arrest. He was arraigned in court and, being wealthy, fought the case bitterly. The evidence was so overwhelming that he was convicted very speedily and received an unusually severe sentence—six months in jail and a fine of one thousand dollars. In addition, he was compelled to give the balance of weight of coal to the defrauded purchaser. The convicted man appealed the case to a higher court, but there is every reason to suppose that the verdict of the lower court will be sustained. The coal dealer will then have no other alternative but to begin serving his sentence. The case attracted wide attention in all parts of the state on account of its somewhat unusual features. It cannot be denied that the effect will be far-reaching, and that other coal dealers will hesitate about sending out coal short in weight. It seems to me as if the department is helping in the solving of the problem of reducing the cost of living by engaging in such work as has been outlined.

Watching Sale of Butter and Milk

These are only a few of the cases we have encountered. Many other instances could be cited of fraud and deception practiced on all sides, but adding to the list would serve no useful purpose. This article, though, would not be complete were I to omit mentioning a few other accomplishments, which have also played an important part in relieving the burden of the housewife. Chief among the reforms inaugurated must be mentioned that brought about in the

sale of butter. This commodity was sold in prints which were supposed to contain a half-pound, pound and two pounds, but there was no weight marked. The merchant always sold a "print" of butter, not a half-pound or a pound. This led to an investigation. The so-called "prints" were purchased in all the larger cities. They were subjected to a thorough test and it may surprise the reader to learn that 85 per cent of the number tested were found short in weight from one-quarter of an ounce to two ounces. This shortage was entirely too great with butter selling at for from 45 to 60 cents a "print." The net result of our investigation was the promulgation of a ruling which compelled butter packers to mark clearly on the outside of the wrapper or carton the net weight in pounds or ounces of the butter within. This enabled purchasers to determine just what they were paying for and getting. It is an excellent ruling and has worked out very satisfactorily for the consumer. The packers were at first disposed to evade the law, claiming that it was too drastic and complying with it would be a hardship upon them. They further contended that butter would shrink or evaporate, which is true. But it would not shrink as much as they claimed it would. Some packers were also desirous of printing the words "when packed" on the carton or wrapper, but we would not accede to this request as it would have enabled the packers to evade the ruling. As above stated, the ruling has worked out very satisfactorily and has saved consumers of the commodity thousands of dollars by securing for them full weight.

Good work was also done in the sale of milk. The bottles formerly used in New Jersey were of all sizes. Thousands were found short of the capacity claimed for them. To remedy this a law was enacted which provided that, beginning November 1, 1912, bottles be only of standard capacities and must also have the capacities blown in the bottle. The law further provides that bottle manufacturers must use a designating number to be furnished by this department. This number is known to all superintendents and enables them to recognize readily just what firm made the bottles. If they are found short of the capacity prosecution is thus made easier. Those who violate the law would incur a fine of five hundred dollars. Since the law has been effective there have been no prosecutions. This would indicate that bottles now contain full measure, as they are tested by the officials at frequent intervals.

Other Crusades and Reforms

Probably the most far-reaching crusade was that conducted against the use of liquid measures for dry. Many merchants used liquid measures exclusively for the sale of winter beans, peas, cranberries, etc., instead of dry measures. This meant that the consumers were being given short measure, as the liquid quart is almost ten cubic inches shorter than the dry quart. The difference may not seem so much in itself, but it should be borne in mind that the merchant uses these measures many times in the day, six days in the week and fifty-two weeks in the year. The shortage in this time would reach a surprisingly high figure in dollars and cents if it could be computed. Over seven thousand liquid measures were confiscated last year. Those found using them now are brought in court and fined ten dollars. No excuses are accepted. The inflicting of a penalty will do more to bring about compliance with the law than any other method known. Today, the grocer or butcher using a liquid measure for a dry cannot be located in New Jersey. This may seem like exaggeration, but it is not. Standard measures are in use everywhere. The substitution means something in favor of the housewife, though she may not be aware of the fact.

Much could be written about the various pieces of equipment confiscated in New Jersey. They have attracted wide attention wherever exhibited. Requests have reached us from many of the Western States, asking for the loan of equipment for purposes of display. The department conducted an exhibit of confiscated standards last year at the inter-state fair, held annually in Trenton. The display contained over ten thousand different pieces and was a source of wonder to one hundred thousand persons who stopped and witnessed demonstrations of how the public was defrauded. The department is always striving to interest the housewife. She does the buying for the home and we have been trying to show her how she can buy more economically. Literature containing useful hints is distributed gratis. There were over twenty thousand requests last year for copies of our pamphlet, "What Every Housewife Should Know"—a very forcible illustration of the fact that people are waking up. Furthermore, many homes have been provided with an accurate family scale on which are weighed all purchases. This brings home to the various merchants the fact that they must be

careful when weighing. The investment in purchasing a scale is a good one and it pays for itself in a short time. But to get back to some of the equipment confiscated. Scales were found with pieces of lead, fat, putty, soap, etc., weighing from two to five ounces, concealed underneath the pan of scale. This foreign matter on scales always caused a corresponding reduction in weight of articles purchased. Five hundred scales, "doctored" in this manner, were found in use in New Jersey. These facts would be hard to believe if we did not have the evidence.

Thousands of weights were found in use short from one-half an ounce to six ounces. They were confiscated and replaced by correct ones. Does not this help the consumer? Most assuredly it does. Then, too, baskets used for the sale of fruits and vegetables were of every known size and shape, but they were always sold by the "basket." No capacity was mentioned, but the consumer was always under the impression he was paying for and getting half-bushel baskets, when in reality, he was buying from baskets holding but twelve to fourteen quarts—a difference of from two to four quarts in favor of the dealer. Even in quart berry boxes fraud was practiced, as the boxes represented as quarts rarely held the capacity claimed for them. All this confusion will be done away with after November 1. A law becomes effective at that time which will standardize baskets and boxes used for sale of berries, fruits and vegetables. This law, when it becomes operative, will, for the first time in the history of the state, insure consumers getting full value for their money when buying the products mentioned.

In conclusion I think I am justified in saying that the formation of the department has had a most wholesome effect on the cost of living. It has secured full weight and full measure for consumers throughout the state. It has made money go further than before. Enough has been shown, I think, to convince the most skeptical that the work of the department has had a most beneficial effect. We are not quite two years old yet and we have attained excellent results. We shall labor just as valiantly in the future as in the past with the hope that our efforts will ease the burden of all.

SAVINGS THROUGH PROPER SUPERVISION OF WEIGHTS, MEASURES AND STANDARDS

By FRITZ REICHMANN, Ph.D.,

Superintendent of Weights and Measures of the State of New York.

Smith writes Jones three letters: the first expressing views on a technical subject; the second, offering certain commodities for sale; the third, a personal note remarking on the height and the weight of his first-born. These three writings would be absolutely unintelligible to Jones unless there were a basis of comparison; unless the quality and the quantity referred to definite standards; unless the money were standardized in quality and quantity and unless the weight and the height were in terms of recognized standards. With readily understood basic standards, Jones knows immediately what Smith means and understands him perfectly. Imagine the confusion and the waste of time, effort and money for Jones even to attempt to understand the three letters, let alone attempt an equitable transaction without standardization.

Every civilized, and therefore complex, scheme of government must, to a certain extent, regulate the traffic in commodities for the protection of itself as a purchaser of supplies and for the protection of the producer, the distributor and more particularly, the consumer. Such regulation or supervision necessarily means not only the establishment of standards but also seeing that the same are compiled with in reasonable limits. The most primitive scheme establishes standards of exchange of money, then makes the assumption that every individual has knowledge of detail and can protect himself. This principle of "Let the purchaser beware," does afford protection in a simple, small and primitive group of society. With the increasing complexity and expansion of society, specialists are developed and certain standards based on honest trade, custom and technical conditions must be established. The launcher of any commodity must be made responsible and the principle of "Let the seller beware" is still necessary. The launcher becomes the responsible specialist and the responsibility must be insisted on and enforced; either by duly appointed and trained agents of the national, state,

county or city government, or by agents of an organized trade society who enforce the regulation by rigid coöperation of those launching the particular commodity. Such enforcement cannot be equitably done except in a broad, economical spirit. It is very important to enforce the idea that it is not necessary to have any governmental regulation of standards that have been universally adopted and adhered to by custom, and any attempt to regulate such is merely providing for unnecessary positions at the expense of the public, and is no protection of the public.

Standards may be divided broadly into two classes, fundamental standards and commercial standards. The establishment of fundamental standards of quality and quantity is a physical or chemical research operation. The establishment of commercial standards is an economic operation with a utilitarian object, and may be based partly on the former. The attempt of the former to do the latter has always and will always be disastrous as has been so often demonstrated. Having fundamental standards of governmental uniformity throughout a nation necessarily saves time and effort, and, if there were universal fundamental standards among nations, there would be a still greater saving of time, effort and money. Such is the basis of the argument of those advocating the universal adoption of the metric system. It makes little difference what system it is, so long as a universal system of standards is adopted. Trade standards are standards in commerce and their establishment and their uniformity produce most immediate and direct saving to producer, distributor and consumer.

Specific illustrations of the saving of time, effort and money through standardization are numerous. For example in the matter of standardization of commercial weighing and measuring devices, the first official specifications for such devices issued in the United States were established by the Department of Weights and Measures of the State of New York, and they have since been copied with slight variations to suit local conditions by other states, by cities and by a federal government bureau. Some variations have been made to suit local conditions; others, like the federal government bureau, made some variations for the purpose of argument and are bad, as they are not based upon practical experience. The New York state specifications were based upon economic principles and upon experience, were consistent with the best trade and manufacturing practice,

were not arbitrary and were not founded on preconceived notions. The result has been that the consumers have been protected by having the weighing and measuring devices used in trade such as do not facilitate the perpetration of fraud.

This standardization of types, together with the requirement of the representation of how much is delivered, saves the purchaser in time and effort because he knows *how much* immediately, and saves him money because he has a basis of comparison. The dealer saves in effort and time because he purchases his weighing and measuring instruments on condition that they comply with those official specifications, and he saves in money because he knows that he will not have to waste time and he will not have to pay for unnecessary adjuncts. In ordering his supplies he knows that they will be delivered in known standard amounts. The manufacturer is on the same basis, and he has before him the standard specifications with which he must comply before he can make his goods. The whole effect of this establishment of uniformity in commercial weighing and measuring devices has been a coöperation and a clear understanding, and has discredited the unscrupulous. As soon as the latter were discouraged, the possibilities for fraud were reduced, and consequently, there was a saving in money to the honest dealer and to the consumer.

The associated lamp manufacturers were the first to recognize standards in incandescent electric lamps. These standards naturally drew comparisons. These comparisons ultimately gave the consumer the modern incandescent electric lamp which has saved the manufacturers and the consumers great amounts of money, giving more light per dollar than could possibly have been obtained ten years ago. The manufacturers of iron pipes and plumbers' supplies have recognized that the multiplicity of pipe diameters, sizes and parts has caused a great deal of worry and effort. Consequently, by mutual agreement, certain definite standards of pipes have recently been adopted which have eliminated a great economic waste heretofore prevalent. There has been and will continue to be, a consequent saving in money to the manufacturer, to the dealer and to the owner of a home. The standardization of screw threads and standard screws has been discussed for at least a hundred years. It was a general practice fifteen or twenty years ago to have a multiplicity of screw threads. Many manufacturers of machinery or instruments prided themselves on the

odd sizes of screw threads they used. Today, by mutual agreement between machine manufacturers, a great many sizes of screw threads are standardized so that a person need not any longer waste time, effort or money in selecting a machine screw for a certain purpose. He knows that when he orders certain sizes of screws they will exactly meet the requirements, and that there is no need of re-cutting or re-tapping. The standardization of the parts of railroad cars has made a very material reduction in waste and a material saving in time, effort and money. Twenty years ago, a car that was in any way damaged or had to be repaired required almost re-building; today wherever in the United States a car may be damaged or a part lost, the damaged or lost part can be immediately replaced, because the parts have been standardized.

As a final illustration: The state of New York passed a law, known as the Brooks law, requiring certain containers for fruit to be of standard size, and requiring that, in the selling of any commodity whatever, a representation be made of how much is sold. As a result of this legislation in New York state, Congress enacted a statute amending the pure food and drugs act, requiring that on foods in packages, a representation must be made of how much is contained in the package. The federal law is, of course, very much narrower than the New York state law. The immediate effect of the passage of these statutes will be that, by mutual agreement among manufacturers, certain containers will be standardized, in so far as this is practicable in the distribution of their goods. Such standardization following the requirement that a representation of "how much" be made, must start with the launcher of the container, and cannot, in sincerity and equity, be enforced through penalizing the person who has goods packed in unstandardized containers. The manufacturer of the container must, himself, be penalized. The standardization of packages and shipping containers is bound to be realized with a consequent great economic saving.

In all questions of standardization of a commercial nature, it must be borne in mind that the three parties which must be considered are the producer, the distributor, and the consumer; and the three elements that must be considered are whether such standardization will save time, effort and money.

In the matter of savings to the consumer, what has the establishment of the standards of weights and measures and an inspection

service accomplished? As the only available data on the results obtained by inspecting weights and measures are that of the state department of weights and measures of New York state and as this was the first state to have broad statutes on the subject, I will draw therefrom.

In 1907 and 1909 with no constructive or systematic inspection of weighing and measuring devices used in trade anywhere in the state, the averages for the state show that only 53 per cent of the scales, 48 per cent of weights, and 48 per cent of measures were correct; in other words half of the commercial weighing instruments in daily use were incorrect. The vast majority of these used showed an error, detrimental to the consumer, ranging from 3 to 10 per cent. At the same time, commodities put up from bulk and ready to be delivered were tested. Those tested showed that, approximately 40 per cent were correct, and 60 per cent incorrect.

Investigations in 1911, 1912 and 1913 made after the establishment of the weights and measures inspectional service in the state under state supervision, showed that 80 per cent of the scales, 84 per cent of weights, and 83 per cent of measures were correct. (These figures should be slightly higher, if the full results of 1913 are taken into account.) The prevailing inaccuracies in the instruments that were incorrect were not over 3 per cent. Goods ready to be delivered and weighed and measured from bulk showed that 75 per cent were correct.

The correctness of the commodities delivered is therefore roughly proportional to the correctness of the weighing and measuring devices used.

It must be noted that practically in no place was there any difference in price between correct weight or measure and short or incorrect weight or measure; the consumer pays as much for 14 ounces as he would for 16 ounces.

To summarize:

	1st Instance No or very faulty inspection and poor standards		2d Instance Established inspection under state supervision and state specifications from commercial weighing and measuring de- vices	
	Per cent incorrect	Average percentage loss	Per cent incorrect	Average percentage loss
Scales.....	47	3 to 10	20	less than 3
Weights.....	52	3 to 10	16	less than 3
Measures.....	52	3 to 10	17	less than 3
Commodities.....	60	7	25	less than 3

Money loss is directly proportional to these shortages. This enormous, almost phenomenal, reduction is due solely and purely to the establishment of state supervision of weights and measures used in trade and the establishment of standard specifications for such weighing and measuring devices.

The above, then, irrespective of prices paid, represents the loss in dollars and cents eliminated, or in other words, the money saved to the consumer, due to the instruments alone. The former loss of 40 cents on every ten dollars has been reduced to the loss of not over $7\frac{1}{2}$ cents out of every ten dollars.

The instrumental side and the sale of bulk goods are only one phase of weights and measures or standards. Many and increasing numbers of commodities are sold in packages. Package goods are increasing in number for simple economical reasons, but at the same time, such package goods have been used in many cases deceptively to create an idea of exclusiveness and superiority. Thus the advertising and other selling expenses have been increased beyond a reasonable limit, where advertising should be used for the purpose of increasing total sales, in order to reduce the unit manufacturing cost. This has worked to the detriment of the consumer and to the detriment of the dealer in many cases.

The state of New York, as cited above, has passed a law that all goods will have to be marked to indicate how much is delivered and all package goods will have to be marked to indicate how much is contained therein. The state of New York is the only state which has a statute to cover all kinds of commodities. This gives consumers a ready means of comparing goods which they could not have without such marking.

Take a few illustrations. (1) Many cereals formerly put in two-pound packages and retailed at 10 cents have now shrunk to twenty ounces at 10 cents. The same kind of cereals of other brands now sell thirty-two ounces for 9 cents. (2) Fourteen ounce prints of butter in one store were sold for 36 cents, sixteen ounce prints in another store were sold for 38 cents—the latter, of course, is very much cheaper per pound, but without a representation being required, the consumer does not know. The honest dealer, as well as the consumer, is defrauded. (3) A package of Lion Brand Wool (16 ounces), costs \$1.50; a package of Pansy Brand Wool, (14 ounces) costs \$1.50. Formerly, the latter was not marked, the outside of the package was the same. It was deceptive and a case of moral fraud and an injustice to the honest manufacturer. By knowing the contents, the consumer could readily save two ounces out of sixteen, or $12\frac{1}{2}$ per cent—considerably more than savings at bank interest, far better than farm mortgages. (4) A roll of ribbon (10 yards) costs 35 cents; a roll of unmarked ribbon ($9\frac{1}{2}$ yards) costs 35 cents. (5) Twine has been sold by some concerns by net weights, namely, selling twine. Others have sold it by gross weight, namely selling twine and wrapping at the price of twine. The excuse is made that the wrapping is more expensive than twine, but twine is the commodity desired and the wrapping does not serve the purchaser even if it were made of gold-leaf. (6) Seeds have been sold by liquid measure, this latter giving in dealing a direct loss of 15 per cent. (7) Picture cord when marked 25 yards or 75 feet generally sells for 10 cents. Picture cord selling for ten cents but unmarked will be often found to measure only 55 feet; a loss of 20 feet or $26\frac{2}{3}$ per cent.

These illustrations can be increased almost indefinitely, and it can always be borne in mind that by requiring a definite representation, there is no increase in apparent price but an actual decrease in actual price.

The New York state law requiring the marking and the representation of quantity, takes away the premium on dishonesty, and enables the consumer to buy intelligently. Disregarding hardware, dry goods, drugs, twine, paper, notions, seeds, coal etc., one can get a rough estimate of the annual savings to the consumer in the state in the past five years due to definite standards of apparatus and quantity on a few of the necessities of life.

This is stated in tabular form as follows:

Commodity	How formerly sold	How now sold due to changed conditions	Gain in quantity per unit to the consumer, due to changed conditions	Total gain in money due to standardized weights and measures in quantity in the state per annum
Flour.....	Gross weight	Net weight	Up to 16 oz. in 48 lbs.	\$ 500,000
Bread.....	The loaf	Net weight	Up to 3 oz. in 1 lb.	3,000,000
Cereals.....	The package	Net weight	Up to 6 oz. in 1 lb.	500,000
Small Fruit...	The box or basket	Net standard dry measure	Up to 25%	500,000
Meat.....	Gross weight	Net weight	Up to 3% on 1 lb.	5,000,000
Potatoes.....	Short measure	Net weight	Up to 20%	2,000,000
Milk.....	The bottle	Standard measure	Up to 5%	2,000,000
Sugar.....	Gross, partly	Net weight	Up to 5 %	1,500,000

This estimate is extremely conservative and the amount of \$15,000,000 saved annually to the people of the state by having standardized weights and measures and quantities through an inspectional weights service under state supervision, is the minimum amount. When to these are added the hundreds of items that are used in the field, in the factory, in the store, in the office, in the hotel, and in the home, the actual amount saved to the consumer is many times increased. To this, of course, should be added the savings in time and effort, which means in reality an additional saving in money.

In the above I have gone into considerable detail as to the savings to the consumer. Similar figures borne out by facts brought forth in investigations can be shown to be savings for the producer, be he manufacturer or tiller of the soil, and can be shown for the distributor, be he wholesale or retail dealer.

MUNICIPAL MARKETS

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The twentieth century city has two very definite food problems. One is to keep its gates open to the food supply of the nation and the world; the other is to open wide its gates to the output of the agricultural country round about. One unfortunate result of making available to each city the food supply of all sections of the nation, and indeed of the world, has been to cause the urban dweller to give all too little heed to the output and prosperity of the surrounding farming community. The twentieth century need is to encourage near-by farmers to sell at home.

The Need for Selling at Home

No section of the United States is now wholly rural. In all parts of the nation, the city is growing apace. In no state in the Union from 1900 to 1910 did the urban population increase less than 10 per cent, while in 16 states it increased from 10 to 30 per cent, in 13 states from 30 to 50 per cent, and in 19 states over 50 per cent. In 6 states the rural population actually declined; in 6 states the urban population more than doubled. This growth of cities in all parts of our country means ever-widening possibilities for local marketing and for selling at home. As the season's output runs from south to north, each city, through national agencies, can now avail itself of every possible variety of foodstuffs. But by proper civic action and coöperative encouragement each city can also buy an ever-increasing proportion of its own season's output at home. This buying and selling at home will mean a larger output from the surrounding farms; will mean the adaptation of that output to local markets; will mean stimulated land values and a more prosperous local community round about; will mean a richer purchasing clientele for the city's factories and stores; will mean goodly savings in food distribution, and hence in food costs.

The farmer's income increases with his marketing facilities. The Cornell Agricultural Survey of March, 1911, found that the average annual income from labor by 615 farmers, operating their

own farms, each with an average capital of \$5,527, was but \$423; and that the average annual labor income of 154 tenants was but \$379. Other sources also indicate that the average farmer does not make over \$700 per year, or less than two dollars per day. He does not make more now than does the average city wage-earner. This largely accounts for the exodus from the farm. It also points to the need, lest we become a nation of peasant farmers, for an increase in the farmer's actual income.

Increased facilities for selling at home will stimulate output. If we are to remain an exporting nation, our farmers must increase their yields and all land available to agriculture must be put to use. Due to the increase in urban population, without a corresponding stimulus to food producing, the amount of our exports is rapidly falling off. In 1904 the cattle exported were valued at \$41,000,000; in 1911, their value was \$14,000,000. From 1901 to 1911 the pounds of fresh beef exported fell from 354,000,000 to 9,000,000. Though a young nation, we are already on the verge of becoming dependent on the outside world for our food supply.

Selling at home will not only stimulate output but it will also have a psychological tendency to make the farmer adapt his output to local conditions. To derive the greatest possible profit from his products, the farmer must pay attention to the condition of his goods, to their appearance, and to economy and promptness in marketing them. While the output of any given farm will have to be adapted to soil and climate, to the abundance or scarcity of labor, to the size of the farm and to the tariff, yet, other things being equal, of greatest influence is the opportunity for marketing. Through proper marketing facilities, Munich, a city with a population of one-half a million, now gets one-fourth of its meats by road from neighboring farms.

Cities cannot live solely by the exchange of goods among themselves. They must also exchange their products for the farmers' goods. The city's prosperity is in direct ratio to the cost of distributing its output. For the manufacturer as well as the farmer, selling at home means lower distribution costs. The greater the freight and transportation costs, the lower the returns for the urban store. Urban prosperity is enhanced by selling to and buying from the country round about. In the more direct routing of food products lie golden prospects for lower living costs. Municipal markets further this direct routing.

Municipal Markets in the United States

Municipal markets are not new. They were formerly found in every village and city. It was only in the latter half of the nineteenth century that the cities, absorbed in the development of their own industries, began to be neglectful of markets and market places. To be sure, fairly good markets still exist in many cities throughout the United States. Several cities claim fairly comprehensive markets. But such is not the rule. Out of 158 cities reporting to the Census Bureau for the Statistics of Cities for 1906, 104 (including 28 that spent less than \$1,000, and, therefore, must have had no market policy of any importance) reported no expenditures for either market or public scales; 42 reported expenditures of from \$1,000 to \$10,000, and only 12 of the 158 reported annual expenditures of \$10,000 or over. Out of 184 cities reporting for the Statistics of Cities for 1910, 88 reported no expenditures for markets and public scales; 35 reported an expenditure of less than \$1,000; 47 an expenditure of from \$1,000 to \$10,000, and but 14 an expenditure of over \$10,000. In other words, not over one city in a dozen throughout the United States has now anything like an effective market policy. Our cities are spending two dollars on cemeteries and crematories to one on markets; more, that is, on resting places for the dead than on food buying facilities for the living.

Municipal markets do not develop themselves. The American attitude has been to set aside a building or a plot of land for a market and then expect the market to be a success. The making of a successful municipal market with maximum results necessitates virile energetic thought and supervision. In the first place, there must be a terminal wholesale market in cities of any size where foodstuffs from both near-by and distant regions may be offered for sale as directly and as reliably as possible. A second essential is the adaptation of the kind and location of markets to modern customs, to movements in population and to transportation facilities. The third essential to a successful market policy is the encouragement of farmers' markets as distinct from merely groups of professional retailers, so that producer and consumer may be brought more directly together. Fourthly, charges for stall rents must be fixed at a point that will bring a reasonable return on the investment or present value, but not at a point that will return unduly large profits to the city. A fifth prerequisite to

success is to give to stall renters every reasonable facility in buying, preserving and selling their produce. Again the markets must be so regulated and supervised as to cleanliness, purity of food, and honesty in weights and measures, that it will be preferred by consumers as a buying place above other places not so regulated and supervised. And, finally, there must be thorough and systematic supervision and administration of the city's market policy, including reports on retail and wholesale prices, so that the public markets may be a real competitive factor both in attracting trade and in fixing consumers' prices.

The Wholesale Market for General Trade

The wholesale terminal market is needed to give a reliable clearing place at minimum costs for food produce, coming alike from neighboring farms and from producers in distant regions, thus securing to the city both the season's output of other climes and the greatest possible amount of selling and buying at home.

But few municipal wholesale terminal markets are found in America and such as do exist are not always administered in a way conducive to the best results. Well administered terminal, wholesale markets are characteristic of every European city. Typical markets of this character are found in Budapest, Prague, Havre, Lyons, Brussels, London, Paris. The establishment in Paris, for instance, located near the Louvre, and known as the *Halles Centrales*, consists of ten pavilions and open structures, partly covered by a roof, occupying in its entirety 22 acres and erected at a total cost of \$22,000,000. In this vast entrepôt, various market supplies are received by rail, by drays, by boats in the Seine River and by great wagons from the country; over one billion pounds of products are sold there every year.

The great need of American cities is properly located, adequately equipped and well administered public terminal, wholesale markets. The prime essential for such a market is location at a point where the tracks of all the railroads entering the city can terminate. If possible, it should also be located near the water front with adequate wharfage facilities for all truck boats; if this is not possible, then there should be a second such market on the water front.

An Auction Department in Wholesale Markets

In order to fulfil its mission as a reliable terminal for produce sent into the city, a requisite essential to success is sale at auction by bonded city officials, forbidden to be interested directly or indirectly in the trade of market wares of any kind. The commission to be charged by these licensed auctioneers must be definitely fixed. In Europe the commission ranges around 2 per cent of the total annual auction sales. This in itself is a much lower cost for selling than the usual commission charged in this country. This saving, however, is a very insignificant part of the total savings to be made by adopting the auction system. Great savings will be brought about through the elimination of all commission abuses. Of still greater significance, the producer will be tempted to ship to the city with such a department, knowing full well that he will get maximum returns for his goods. The producer then has three choices: either alone or in coöperation with others, he can rent stands in one of the retail markets; he can ship directly to some wholesaler; or he can sell at this public auction. The experience of European cities is that he adopts the third.

Just such results from auction departments in terminal wholesale markets are emphasized in the recent special consular report on European markets.¹ Consul John C. Covert says as to this system in Lyons: "Fish and game are brought here for sale from England, Germany, the Netherlands, Russia and from all parts of France. If a grocer or butcher anywhere in France, in fact anywhere in Europe outside of Lyons, has an overstock of any kind of provision, he is always sure that he can get rid of it at the central market auction in Lyons. Often a stock of provisions is sold here at private sale by correspondence for and to parties outside the city." Consular Assistant Frank Bohn writes as to results obtained in Berlin: "The municipal sales commissioners are bonded officials who are forbidden to be interested, directly or indirectly, in the trade market wares of any kind. They are responsible to the market-hall management, and are allowed to collect a certain fixed percentage of all sales made. The primary purpose of these officers is to offer distant dealers and producers opportunity to ship in their wares, and have them brought into the hands of Berlin dealers and consumers, through the agency of

¹ See Special Consular Reports, Vol. xlii.

responsible middlemen and with the assurance of a published and steady price. A second or indirect purpose is that through their competition with the private wholesale dealers and through the daily publication of their report on the average wholesale prices for all wares and at all the halls, the municipal sales commissioners exercise a steadying influence upon the entire wholesale business. Although it is estimated that they handle only about one-fifth of the total wares received at the central market-hall, it is nevertheless conceded that they indirectly prevent extortion by the private wholesale dealer upon the producer or dealer on the one hand and upon the consumer or retailer on the other."

There can be little doubt that the auction department of the municipal wholesale terminal market is of great value in getting reliable and stable sales for goods sent in alike from the neighboring regions and from the most distant countries. To prevent abuse, it would be necessary to enforce strictly the regulation that all goods sold at the auction department must come from without the city.

The Administration of Wholesale Markets

Not only can trade be attracted from without by bona fide municipal auction sales at a terminal market and by similar means of giving confidence and publicity to such a market center, but facilities can also be offered of a character that will attract to such centers buyers from all parts of the city itself. As in European cities, chilled rooms can be provided into which perishable produce can be unloaded from the cars, and repacked to suit the trade, without the deterioration inevitably resultant from unloading in a warm atmosphere. Under the market-hall, cool, clean cellars and ample cold storage facilities can be made available for the temporary use of all buyers at reasonable rates. This will mean goodly savings in transporting costs and warehouse facilities and will prevent spoilage and lowered values. A municipal canning and preserving plant conveniently located in the building, pays for itself, and prevents deterioration and waste.

A municipal terminal market makes for many economies in food distribution. By delivering cars right at the wholesale market, all trucking from the railroad terminal to the wholesale market is eliminated. The significance and value of this saving will vary with each of the cities. For instance, every day from New England, quantities

of fish are brought to the freight terminal on the Harlem River in New York City, and, because of the lack of marketing facilities there, are then loaded on a barge and taken down to the fish market, there to be sold, only to be again carted back up town. A municipal market and distributing depot in the Lower Bronx on the Harlem River, at a point of convenient access to the railroads and water lines, will eliminate much of this useless trucking. It is safe to estimate that a terminal, wholesale market will save at least ten to twenty dollars a car in hauling costs. It will effect even greater economies in time, in interest on investments and in facilitating the marketing of the food supply. At many railroad terminals there are such private wholesale markets now. But they are not adequately regulated, they are not supervised by public officials, and they are not coördinated with the terminals of other steam, electric and water lines.

A wholesale market attracts not only retail dealers, large and small, but also the larger consumers, such as hotel and restaurant managers, and, more pertinent still, makes possible an increased amount of coöperative buying through consumers' leagues and consumers' coöperative associations. This direct buying without the retailer as an intermediary is definitely furthered by fixing the quantities that can be offered at wholesale at relatively small amounts. In the wholesale market at Havre, France, merchandise may be offered for sale in such small quantities as 6 ordinary sized bunches of vegetables; 9 quarts, or, when sold by weight, 11 pounds, of fruits and vegetables—even this minimum being reduced by half during April and May; vegetables which it is customary to sell by count, such as cabbages, cucumbers, tomatoes, etc., 1 dozen; oranges and lemons, 1 dozen; large vegetables, such as cantaloupes, melons, etc., in as small quantities as one of each. In Lyons, quails, partridges, ducks, etc., are put up in bunches of half a dozen or a dozen; eggs in lots of 100; oysters in boxes of 100; butter in lots of 50 pounds. With sales in such small quantities as these, the smaller consumers, through coöperation, and the larger consumers everywhere can buy with but one intermediary between them and the farmer, and that a public auction department that adds but 2 per cent to the cost of goods.

Buyers are further attracted to such markets through careful municipal inspection of the quality, quantity, weights and measures of all foodstuffs sold. Thus at the wholesale terminal market at Paris, supplies are received, inspected, weighed and sold to retailers and

consumers, under official supervision so constant and efficient as to preclude the sale of unwholesome food products and to prevent extortion and trickery.

Of greatest value to the wholesale terminal market, both because it advertises the market to the producers everywhere and because it gives a basis for comparison with the prices secured by private dealers, is the publishing of a daily bulletin giving the wholesale price of produce, and at least a weekly bulletin giving the retail price as paid by city consumers. This is done in certain European cities with telling effect. Thus the market at Budapest publishes a daily bulletin giving the wholesale price of produce, and a weekly list of retail prices, declaring itself not to be responsible for any controversy which may arise as to results thereof. No one activity on the part of market officials could more forcibly stimulate direct marketing than such published bulletins. Farmers could then have reliable information as to what prices they could secure at wholesale and what prices they could secure by selling their articles directly to consumers.

The economies and savings effected by well located, properly administered, carefully inspected wholesale markets, are, indeed, of no mean proportions.

Mr. John C. Covert, Consul at Lyons, says as to the results attained by the wholesale market there: "During the auction the market women and the keepers of small groceries, fish, fruit and vegetable stores fill the space in front of the auctioneer to replenish their stocks. This market is most emphatically favorable to the poorer classes. Many poor people bid off a bunch of game or fish, dividing the expense among themselves, thus procuring a luxury that they could not otherwise enjoy. It creates a center in the city to which food comes from many points, largely increasing the supply. It reduces the prices to retail dealers in the market and sharpens competition. The auctions are always public and the woman who buys of a small dealer often knows just how much the dealer paid for the articles in the market that morning."

Retail Markets for Social Trade

The second essential to an adequate, constructive municipal market policy is the adaptation of the city's markets to movements of population and to the city's environmental needs. As residential centers change, markets decay. Stall rentals must, therefore, be

sufficient to provide depreciation and replacement funds so that markets may be relocated in order to follow population movements. The typical European market system includes the central wholesale terminal market, as above described, where retailing is also permitted, and a number of branch retail markets. Thus in Paris, there are, in addition to the *Halles Centrales*, 33 small retail public markets. In Budapest there are one central and six branch markets. In Antwerp there are two covered and nineteen open air markets.

Not only must the retail municipal market be adapted to population movements, but it must also be adapted to modern conditions and usages. The retail unit characteristic of the day of the telephone and central supply station is a small store, such as the Acme Tea stores, the United Cigar Company stores, the Horn and Hardart restaurants, where there is a quick turn over of capital, and where delivery charges are low. The retail municipal market, to be successful, must adapt itself to this tendency. Its size will, therefore, depend on the number of buyers round about and will be different for each city and in each section of the same city. It need only be large enough to offer a sufficient variety to the purchaser to tempt him to come there to buy. Its success or effectiveness, therefore, cannot be measured solely by the number of stall renters or purchasers. To compete with modern retailing methods, there must be coöperative deliveries, and to compete with the central buying concerns, there must be coöperative buying among the stall renters. In general, through their associations or otherwise, the stall renters must form an aggressive, competing unit, fully cognizant of the advertising value of thorough inspection of their foodstuffs and of virile supervision of their sales practices.

If municipal markets, wholesale or retail, are to be of the greatest social value, every effort must be made to encourage their use by farmers and other food growers. The market of former days was essentially a place where producer and consumer met. But today, the stall renters in the markets of the American city of any size are almost all professional retailers and in no sense farmers or producers. Thus in the Old South Second Street Market of Philadelphia, the larger of that city's two municipal markets, out of 315 stall renters there are not over a half dozen farmers. Indeed in only ten of that city's forty-seven wards do farmers play any considerable part in the sale of foodstuffs, and even in these ten wards they do not sell to over 10 per cent of the people. The time should come without doubt when

the difference between producers' and consumers' prices will not tempt the farmer to turn salesman for his own goods. But that time certainly is not here now, and for some time will be far away.

In the meantime, and indeed, for competitive reasons, even after this happy state is reached, every encouragement and protection should be given to farmers who desire to sell at the city's markets. In certain of Philadelphia's markets, many professional retail dealers in no sense farmers have out signs proclaiming themselves to be Bucks County, or Montgomery County or Lancaster County farmers, selling only goods fresh from their own farms, when, as a matter of fact, they have bought the goods that morning at wholesale, or, at the best, are jobbers who buy from farmers. Want of confidence results, as purchasers sooner or later learn of this fraud; both bona fide farmers and buyers then stay away from the market. City ordinances should provide that none but bona fide farmers should display farmers' signs.

Another legal obstruction to the farmers' use of city markets in Pennsylvania is the fact that the mercantile tax laws of that state exempt from the retailer's tax the farmer who sells his own goods, but do not exempt him if he brings in the goods of his neighbor. In the days when this law was passed, in the third decade of the nineteenth century, this statute worked no hardship as it let into the city, free of tax, about all the farmers who chose to come in, that is, those not over a fair day's drive out. But now in the days of trolley freight, the motor truck, the gasoline barge and better roads, the radius of possible marketing is five-fold what it then was. Now farmers must, to pay for their time, bring in their neighbor's goods as well. To amend this tax law so as to permit this would largely increase the amount of food produce sold directly from the farmer to the consumer. Of like inhibitive effect is the license fee of one dollar required to sell poultry in Philadelphia. The average farmer does not feel it worth his while, for the small number of chickens he can sell at any one time, to take out the license. There is no inspection that accompanies the license; it is primarily a source of revenue only. These are small things, to be sure, but the tendency is to multiply such small restrictions instead of endeavoring to take away every obstacle and offer every inducement to the farmer who wishes to frequent the city's markets.

Open Air Markets

To give farmers minimum rental costs, at slight expense to the city, in good residence locations, many cities in America and Europe, have set aside streets for open air or curbstone markets. Vienna has 40 such open markets; Antwerp, 19. The rental for wagon space, as a rule, is nominal only. Thus in Atchison, Kansas, and San Antonio, Texas, a charge of ten cents a day is made for each wagon, while in Buffalo the rate for a one-horse vehicle is 25, for a two-horse vehicle, 50 cents per day. In Brussels, the charge is one cent per day, while a bench may be secured for 2½ cents, or a covered stall for 5 cents, furnished and set up by the city. This practice of merely nominal rentals for stall space is no doubt the correct one. Careful inspection is necessary to make sure that all space renters in such markets are bona fide farmers. If other venders are allowed to use such markets at all, they should be segregated in sections clearly marked by placards as set aside for venders not farmers. This is done in Rochester's market. A third section could likewise be set aside for pushcart venders. All licensees must be required to deposit their refuse and papers in rubbish cans with secure lids and every other precaution taken to keep the streets sanitary and clean. Collapsible counters and coverings should be available for use in sunny or in rainy weather, to be removed by their owners after the market is over.

The pushcart, the vender's wagon and the open air farmers' markets offer the cheapest possible store at adaptable locations, and thus should give avenues for food distribution at minimum costs. While there can be no doubt that the covered market will be the better in the long run, yet the open air curbstone market offers a good temporary method of attracting farmers and of giving consumers an opportunity to buy directly. Two and a half miles of streets in Cleveland are lined by 1300 farmers and 400 hucksters. Both Baltimore and Montreal attract 1500 wagons each market day by their curbstone markets. The results of such a market in Des Moines have been described as follows: "Between 100 and 200 farmers gather on the city hall lawn and in the streets adjacent thereto between the hours of 5 and 10 o'clock in the morning, without paying any license or rent. They are permitted to sell direct from their wagons to the city consumer. The result has been that they have received approxi-

mately 50 per cent more for their produce than the commission men paid them before, while the city buyers get their produce for approximately 50 per cent less than was paid formerly. By compelling the sellers to display large cards stating whether they are gardeners or hucksters, the public is enabled to discriminate and to purchase direct from the man who grows."

The secretary of the Chamber of Commerce of Oklahoma City says as to the effects of the curbstone markets in that city: "There can be no question as to the market having reduced the cost of living to the average family in Oklahoma City. . . . The first day there were about seventy wagons present on the market, and a small crowd of buyers. Within a few weeks we counted 318 wagons on the street (their contents valued at \$5,000) and a swarming crowd of people who jostled and shouldered each other in their efforts to secure the choicest first." (Written September 14, 1912.) Another writer says as to the results of this same market: "Actual figures, comprising the retail cost of all kinds of food supplies in Oklahoma City with those of a year ago show decreases ranging from 25 to 50 per cent; nor is this the only benefit the city has obtained through the establishment of the market, for the facilities for the sale of farm and garden produce have greatly stimulated agricultural settlements in the vicinity. Since the market was established more than 25 families have taken up small tracts adjoining the city for truck gardening, and hundreds of inquiries from others who wish to take advantage of the market have been received."

Market Rents and Facilities

Since the purpose of municipal markets is to give facilities to producers and lower prices to consumers, stall rentals should be fixed at the lowest point that will mean a fair return on the investment and provide for adequate renewal and depreciation funds. This principle has been fairly well carried out in many cities. A fresh meat dealer in the central market of Paris can rent a stall, secure the service of attendants and pay for sweeping and cleaning for about \$6 per week. Stalls in the covered secondary markets are rented at from 10 to 30 cents per day. In Berlin the highest rental for meat stands is 9½ cents per square meter per day when rented by the month, and 12

cents when rented by the day. Fruit stands vary in rental from 5 to 9 cents per day.² Stalls in any one of the three substantial brick market buildings in Indianapolis may be rented at \$2.75 to \$7 per month.

Even with such moderate stall rentals, there seems to be no difficulty anywhere in running markets at a profit.³ But the success of municipal markets must never be gauged in terms of profits. The city should be satisfied to get a reasonable return on the investment or a fair present valuation.

Of greater importance than low rentals are adequate and proper facilities for stall renters and for the purchasing public. The public must have clear passage-ways and fair purchasing opportunities. All noises, singing, acrobatic performances and distribution of hand bills must be prohibited within market limits and within a reasonable distance from the market. Hawkers and peddlers must be forbidden to ply their trades within at least five hundred feet of the market. The terminal wholesale market will, of course, have maximum transportation and distribution facilities for both the general and the country trade, with railroad tracks on both sides to facilitate unloading, with ample wharfage, docking and transshipping machinery. Each of the small markets where possible should have branch terminals, especially from all the transporting agencies that reach out into the surrounding farming communities. Thus trolley terminals at each market will give an avenue for direct buying in less-than-carload lots and an easy and popular outlet for the surplus of small farmers.

² In Rotterdam, the stall rentals for vegetables and fruits are \$2 per year, 20 cents per month or 6 cents per week for a space of about 20 square feet. In Birmingham, the rents for stands in the wholesale markets average about 18 cents to 24 cents, with an occasional 40 cents, per square yard per week; while in the retail markets, the rents for stalls and shops vary from 24 cents to \$4.37 per week according to position and class of business. Germany has subsidized her municipal markets by a law reducing the import duty one-half and railroad charges one-third for all meat sold in municipal markets or by coöperative societies.

³ Paris has an annual profit on its markets of about \$1,000,000; Berlin, \$135,000; Liverpool, \$85,000; Birmingham, \$156,000; Vienna, \$60,000; Budapest, over \$100,000; Glasgow, \$14,000. There is likewise a profit in American cities. Boston has an annual profit on its markets of \$60,000; Baltimore, \$70,000; New Orleans, \$79,000; Buffalo, \$44,000; Cleveland, \$27,000; Washington (D. C.), \$7,000; Nashville, \$8,000; Indianapolis, \$17,000; Rochester, \$4,000; St. Paul, \$4,000.

Good direct roads will encourage wagon and motor truck shipments while wharfage facilities will stimulate the movement of food by water. Not only can such markets have good facilities for incoming freight, but the stall renters, under proper coöperation among themselves, and with the market officials, can also effect economies in help, in ice, in storage and in deliveries. The goal should be the elimination of unnecessary costs to all, that purchasers may secure their goods at minimum prices.

Lower Food Costs Through Inspection

But minimum prices, it must ever be remembered, may in reality be unreasonably high prices unless accompanied by honest weights and honest goods. The one great social and advertising advantage of municipal markets, both for the stall renter and the buyer, is the opportunity afforded by the very nature of the market to enforce the laws and ordinances aimed at adulteration, misbranding, and false weights and measures. Buyers will ultimately seek out the well regulated and well inspected market. By protecting its citizens through virile inspection, the city will also ultimately further the best interests of the stall renters themselves. Inspectors of the health department visit Baltimore's market daily. In certain European cities, such as Budapest, all meats must be inspected before they can be offered for sale. Inspection by market officials, coupled with inspection by city and state food inspectors, should make it almost impossible to sell adulterated, decayed, misbranded, deteriorated, diseased or misrepresented foods or goods at the city's markets. The market buildings can be light, well ventilated, thoroughly cleaned and wholly sanitary. Reasonable regulations can be made as to screening goods from flies and requiring perishable goods to be kept properly chilled.

Health officials, however, need to be constantly reminded that their ends are to be attained by the least expensive, effective means. Food contamination means poor health, suffering and oftentimes death. Health and pure food officials, who have to prevent these disastrous results, are not always careful to accomplish their ends by the least expensive yet effective means. Foods must be protected, even to be cheap; yet the method of protection should not of itself be an undue burden to the business man and the consumer. Through

sane regulations, virily enforced, the municipal market can be made the best place for all to buy. Stall renters as well as consumers will ultimately profit by such standards.

The goods offered for sale in markets, especially in those located in the poorer districts, need not be limited to foodstuffs. In the markets of Antwerp is offered almost everything from vegetables, meat and fish to second-hand books, old clothes, furniture and household goods. In the markets of Budapest are found hardware, toys, underwear, hosiery, etc. In Prague are found kitchen novelties and all the various articles usually found in the American ten-cent stores. In Lyons, there is a special market where manufactured goods can be sold cheaply. To prevent abuse, each class of goods can be restricted to prescribed sections of the market. The sale of various kinds of goods at the markets will both entice purchasers and facilitate their buying at reasonable prices. Cheap rents mean low prices, and low prices will ultimately mean higher real wages.

Results Secured by Typical Markets

Municipal markets have secured results. In Cincinnati 60,000 people flock to the Saturday market; in Baltimore, 50,000 on market days. Henry G. Gniffke thus enumerates the results secured by the open air market in Dubuque, Iowa:

"1. Dealer and consumer come together. There is no middleman's profit to pay. 2. The dealer is under scarcely any expense for rent, fixtures or help. 3. For over 99 per cent of the stuff sold here there has been no freight bill to pay, no cost of crates, refrigeration or boxes. 4. The seller has no real waste, because he can always dispose of any surplus he may have over to the grocers, the shippers and other dealers, besides the home bargain hunters. 5. The purchaser is always sure of fresh stuff. 6. Supply and demand fix the prices, modified by the demands of the shippers for other towns and the abundance of stuff sent in. 7. The variety to choose from is nearly without limit at some seasons.

"An additional advantage of the market comes to the small man who has a surplus that he has raised. He can bring that to the market. For the fee of from 5 cents upwards he can find a place where he can sell this to the very best advantage, with really no expense

attached to it. This also applies to the small dealer who goes out into the country and buys truck to resell."

Consul-General Henry W. Diederich says as to results obtained by the market at Antwerp: "On account of the cheap rental of stalls, merchandise for sale in the markets is sold at prices lower than those prevailing in the stores, and the farm and dairy products and vegetables bought at the markets are fresher and usually of better quality."

One principle as to the market success has not been sufficiently clear to the buying and tax-paying public and that is this: the value of the market to the city and to the consumer depends entirely on the efficiency and thoroughness of the city's market superintendent. Market failure can most often be traced to the sodden interests or the narrow vision of the market master. Markets left to themselves tend to become but groups of grasping retailers, with no interest in public standards and no vision as to results accruing from enforced quality for goods and decency in sales practices. Upon the administrator of the market depend its cleanliness, the effectiveness of its inspection and the extent of protection to the producer, the honest retailer and the consumer. The value and effectiveness of the market as an agency for distributing goods wholesale at lowered prices depend primarily upon the virility with which its affairs are administered. The official in charge must, therefore, be of high character, steadfast in standards, with power to bring all stall renters to high business standards, and ability to attract to the market both producers and consumers. A market so administered will be a vital and up-lifting factor in feeding a city.

Something more is needed than merely a market clerk to administer the routine of the markets. There is needed a market bureau in its broadest sense, supervised by a director whose vision is large enough to include every phase of distribution and whose capacity is great enough to bring about a better coördinated and more efficient distribution system throughout the entire city. Such market bureaus can make a special study of the distribution system peculiar to its city. Through such bureaus needless costs may be eliminated and information secured essential to a sane, constructive city plan for minimum distribution costs. The market problem is as broad and as important as the entire problem of feeding a city.

SOME TYPICAL AMERICAN MARKETS—A SYMPOSIUM

I. THE PURPOSE OF THE SYMPOSIUM

BY CLYDE LYNDON KING, PH.D.

There is everywhere a demand for more definite data as to the results and administrative methods of municipal markets in the United States. It is with the thought of meeting these various demands for information that this symposium is arranged. It is believed that the information in these articles, together with the detailed data given in the questionnaire by Mr. Farley, and the material offered in the other articles on Municipal Markets and Direct Marketing, will cover fully the important problems of municipal markets and the most important results accruing therefrom.

In order that the papers in the symposium might discuss practically the same subjects, the following list of topics was sent to each contributor, who was also asked to include any other data of special interest pertaining to his market.

(1) The character of the market—whether wholesale, terminal, district, waterfront, curbstone, etc.; (2) the charges made for stall and space rentals, and all other expenses that would have to be borne by the licensee; (3) the net profit to the city; (4) the city's regulations as to adulteration, misbranding, weights, measures, food deterioration, sanitary conditions, etc.; (5) the extent to which the city's markets are frequented by bona fide farmers on the one hand, and professional retailers on the other; (6) the regulations and measures taken to encourage farmers to use the markets, including a discussion of existing regulations and practices that discourage direct marketing by farmers, and constructive suggestions as to what steps should be taken; (7) the nature and character of the administration and supervision of the markets by the city's appointed elective officials, including their salary, tenure, qualifications, and the present and proper qualifications for such officials; (8) the nature and character of any publications or bulletins that are issued by the markets; (9) the effect of the market on: (a) producers' prices, (b) consumers' prices, (c) the quality and freshness of the perishable goods offered for sale; (10) the extent to which other foodstuffs are sold at the market; (11) whether or not the city's market policy has had any effect on the output of outlying farming regions or on getting farmers to adapt their products to the city's needs; and (12) constructive measures that should be taken to further the municipal market as an agency for local and direct distribution of foodstuffs and similar goods.

II. BALTIMORE'S MARKETS

BY JAMES F. THRIFT, Comptroller,

AND

WILLIAM T. CHILDS, Deputy Comptroller,

Department of Finance, Baltimore, Md.

The character of the markets. Baltimore is perhaps the pioneer of American cities in municipal markets, three markets having already been established within the limits of the city by the Maryland legislature before the incorporation of the city in 1796. There were only twenty-five houses, four of brick, in Baltimore Town in 1751 when efforts were made, first by subscription, and later, as was the custom of the day, by lottery, to raise sufficient funds with which to erect a public market house. Today, the city of Baltimore owns the land and structures of its eleven municipal markets, located in various sections of the city. Ten are retail and one wholesale, the latter being a wholesale fish and a wholesale produce market. None of the municipal markets is on the waterfront, and practically all goods sold in these markets are hauled to and from the markets in horse-drawn or motor vehicles. We could not term any of our eleven municipal markets terminal markets. There are two independent terminal markets in the city, however, one a wholesale fruit and produce market at the Pennsylvania Railroad Company's Bolton freight station and the other a similar market at the Baltimore and Ohio Railroad Company's Camden freight station. At these two wholesale markets, hundreds of carloads of fruit and produce are weekly sold; some to hucksters, some to the market people and much to commission merchants for re-shipment. In addition, a market of no small proportions is conducted at the municipal docks for the sale, generally by auction, and re-shipment, of weekly steamerloads of fruits, principally bananas, large quantities, however, being purchased by local Italian dealers and sold in the markets. The nearest approach to curbstone markets we have is seen in the streets surrounding the market sheds, given up to market purposes, rows of movable street stalls and wagons being placed along either side of the streets on market days.

Stall and space rentals, and other expenses. The charges for market stalls and spaces vary in the different markets. In Lexington Market, which is the largest and most popular of our markets, and where the highest charges prevail for stall rentals and space, the following annual charges are made for what is known as butcher stalls:

License.....	\$10.00
Rent.....	20.00
Per diem (according to the number of days of the week stalls are occupied).....	12.00 or \$18.00
Total.....	\$42.00 or \$48.00

This is the largest total charge made for any stall in any of the retail markets and no other charges or fees are assessed. Neither are the stalls taxed by the city as personal property. In many instances the stalls were purchased at auction sales at anywhere from \$100 to \$3000 each. The owners have an easement in the stalls, are permitted to sell them or same can be given and taken as security for debt, etc., so long as the owners pay the charges prescribed by ordinances and comply with the market rules and regulations. The annual charges for what we term permanent stalls in Lexington Market are:

License.....	\$10.00
Rent.....	8.00
Per diem (according to the number of days of the week stalls are occupied).....	12.00 or \$18.00
Total.....	\$30.00 or \$36.00

The annual charges for what we term street stalls in each of the ten retail markets are:

License.....	\$10.00
No rent.....	
Per diem (according to the number of days of the week stalls are occupied).....	12.00 or \$18.00
Total.....	\$22.00 or \$28.00

This is the lowest total charge made for any stall in any of the retail markets. It will therefore be seen that the range is from \$22 to \$48 per annum.

The license was increased from \$5 to \$10 this year. In Centre Market, which is our wholesale market, the charge for the wholesale fish sections, including an office, is \$400 per annum, and the charge for the wholesale produce sections is \$200 per annum.

The net profit to the city. The market people contend that the markets are self-supporting under the old schedule of rates, in effect prior to last July, but this cannot be admitted by the city when there is taken into consideration all the expenses to which the city is subjected in providing light and water and cleaning the markets, in addition to all other charges for maintenance. A very large item which the city believes is a proper expense to be borne by the markets is that of the income to the city upon the value that it has placed in the markets. The view of the city is that the markets should not only provide a revenue sufficient to maintain them but also to compensate for the net outlay that it has made in the markets. Taking into consideration, then, the ordinary and natural expense of running the markets and the fact that public property when used by private individuals for private purposes should be upon such basis as to bring the city a revenue for its outlay, it cannot be said that the markets are at the present time operated at a net profit to the city. The market people contend that it is improper to consider as one of the charges upon the maintenance of the markets the expense, over \$30,000 per annum, borne by the street cleaning department in cleaning the streets about the markets and hauling away the refuse from the markets after market hours. The city, however, maintains that this is a proper charge against the markets, and, this being so, we figure that the excess of the expenditures over receipts for the calendar year 1912 was nearly \$24,000.

We can safely say, taking into consideration all of the charges and expenses to which the city is at present subjected by reason of the existence of the markets, as well as the necessity at the present time of spending considerable money for repairs and improvements (estimated at nearly \$100,000), the city is not today deriving a net profit from its eleven municipal markets, but, on the contrary, is operating them at a loss. This is true, even if in the past the markets were self-sustaining and remunerative, by giving proper credit for the large sums of money received by the city from the sale of stalls. Unfortunately all of the old records are not available. Some of the sales of stalls were made prior to 1857, the year the office of city comptroller was created.

Present conditions, however, have caused the present administration at Baltimore to increase the market licenses from \$5 to \$10 per annum and to require the butchers to pay the per diem charge,

which is a charge originally instituted to cover the cost of cleaning the markets, and from which, apparently for no good reason, the butchers have practically always been exempt. It is thought that, with the new schedule of charges, the markets will be made self-sustaining, it being the purpose of the present administration not to increase the market licenses and rentals for revenue *per se* but to put back into the markets in the way of improvements, all the market moneys collected. It is believed that no great hardship will be effected by conducting the markets so that they will not be a charge on the taxpayers; this is our present aim.

It would be interesting to know if there is another large city in the United States in which the public market butchers or produce dealers do the volume of business that is done by the butchers or produce dealers in the Baltimore markets at the small expense that prevails at Baltimore. Prior to this year the total license and rent charges upon the butchers in the Baltimore markets were only \$25 per stall per annum, and in many instances the city derived only \$5 per stall per annum from street stalls.

Regulations as to foods and sanitary conditions. The city's regulations with regard to adulteration, misbranding, deterioration and sanitary conditions are under the supervision of the city commissioner of health. In general the regulations are similar to those of the national government and state. The inspections of the national government and state are largely confined to the meats at the abattoirs, while the city food inspectors are at all times in the markets.

The regulations with regard to weights and measures come under the supervision of the department of weights and measures, of which the city comptroller is the head, and the city's inspectors of weights and measures confine much of their activities to the markets. The city's regulations with regard to weights and measures are similar to standards of the United States bureau of weights and measures. We have in contemplation some changes in our ordinances on weights and measures.

Bona fide farmers versus professional retailers. The professional retailers greatly outnumber the bona fide farmers. The assistant market master of Lexington Market estimates that bona fide farmers are but 10 per cent and professional retailers 90 per cent. In fact, not a few of the farmers, and this is by no means to their discredit,

in order to add to the variety of their stock, purchase no small quantities of produce from the wholesalers in the city to whom the produce may be shipped by water or rail from other sections of the state or outside, or who may have purchased, at auction, at the wholesale produce markets conducted at the Pennsylvania Railroad Company's Bolton freight station or the Baltimore and Ohio Railroad Company's Camden freight station.

Encouragement to farmers. As early as 1860, the legislature of the state of Maryland, recognizing the wisdom of encouraging direct dealing between the farmer and the consumer, passed an act which, after being repealed and reenacted several times by successive legislatures, is still on the statute books, namely:

No charge, tax or fee shall be set, rated or levied upon any person or the property of any person who shall attend any of the markets of said city (Baltimore) with any articles or produce from the country, to vend in said markets, of his own growth, produce or manufacture, or as the agent of the grower, producer or manufacturer of the same, unless such person shall occupy some place or stand in some of said market houses; provided such person or agent be not a resident of said city.

The comptroller of the city of Baltimore, the official in charge of the municipal markets, is often asked, by persons or committees appointed to consider the advisability of establishing municipal markets in their own cities: "What is the attitude of the retail grocer toward the public markets in your city?" To be sure, the retail grocer, for his own selfish benefit, would have no public markets, either controlled by the municipality or otherwise, if he had his way. He has not the same grounds for complaint in Baltimore that he might have in another city where the public markets have but recently been established and have become a new source of competition to him; for, long before he set up his store in Baltimore, the public markets had there become a fixture.

Baltimore is peculiarly situated, perhaps we might say, advantageously situated, with respect to produce. The eastern shore of Maryland is one large garden; and on the western shore, within a few miles of Baltimore, are the famous Anne Arundel County truck farms. Now, it would be almost impossible for the farmers within driving distance of Baltimore to compete with the eastern shore and Anne Arundel County truck farms; in fact, the produce of these sections is on the market long before that of the country round

about Baltimore, and the famous truck farms of the Norfolk, Va., district are only a night's run by steamer from Baltimore. Besides, the modern refrigeration cars, operated on almost passenger schedule, enable the growers in the South to place their produce in Baltimore in comparatively short time. It will therefore be seen that improvement in transportation facilities has cut no small figure in the market conditions. The farmers round about Baltimore have been bringing their products to the Baltimore market all their lives and it is a question whether it would be more profitable to them to devote more acreage to produce than to wheat or corn or hay, etc. This, of course, could only be determined by actual experiment. Perhaps it would not be unwise for the city to investigate this, in conjunction with the state or government experiment stations, somewhat on the same basis as the government and state demonstrators operating under the United States agricultural department.

It is claimed by the market people that the modern department stores and the increase in markets awheel, hucksters who go from door to door and sell all kinds of foodstuffs, hurt their business to no little extent, and frequently the market people contend that ordinances should be passed placing such restrictions upon the sale of meats and foodstuffs by department stores and stores round-about the markets that would prevent the loss of their trade. This is a large economic problem, however, and cannot be satisfactorily solved by theorizing. Farming is becoming more of a science every year and it is not improbable that the time will soon come when every farmer will undertake to solve his problems just as every merchant or manufacturer does. Educational campaigns among the nearby truck farmers, such as are conducted among the farmers with respect to corn and other grain cultivation, would no doubt produce beneficial results to the farmer.

The administration and supervision of the markets. The comptroller has full supervision over the markets. There is a market master, really a misnomer, as almost his entire time is devoted to auditing in the comptroller's office. An assistant market master is in charge of each of the eleven municipal markets, the salaries ranging from \$400 to \$900 per annum, according to the size and importance of the market. The comptroller is elected by the people for four years. He appoints the assistant market masters and he may remove them at his pleasure. They are generally political appointees

and the comptroller determines their fitness for the position. They do not devote their entire time to the markets; the salary does not justify.

No *publications or bulletins* are issued excepting that the comptroller includes in his annual report the financial statistics of the markets. The city has also been publishing since the first of the year a *Municipal Journal* and occasionally items pertaining to the markets appear in the *Journal*.

Effect of the markets on prices. By dealing direct with the consumer, the producer gets better prices than from the middleman or commission merchant. The cost of hauling from the farm is no greater to the market than to the commission merchant's warehouse, and the license for a stall in the market is comparatively small. It is the opinion, after careful investigation, by the assistant market master of Lexington Market, that the consumer can purchase cheaper from the bona fide farmer than from the professional retailer, and it is also a fact that, as a general proposition, produce can be purchased in the markets cheaper than from the stores. To be sure the market people are wide awake as to the prevailing prices and are governed accordingly. This does not necessarily mean that they form a pool to maintain prices. It is a fact with regard to the fruit vendors, however, that bananas or oranges or lemons, for instance, of the same grade, bring practically the same prices on market days at all the stands or stalls from one end of the market to another. Without doubt the housewife is compensated in going to the markets, not only in being able to purchase cheaper than from her groceryman, but particularly in being able to get first quality fresh goods. Only the freshest goods are brought to the markets. In fact, some of the farmers and retailers sell their surplus after market hours to storekeepers in the city.

Other foodstuffs sold at the markets. Every article of food imaginable is sold in the markets, produce, fruits, meats, fish, oysters, crabs, game, canned goods, cakes, candy, butter, eggs, poultry. Indeed, there is very little the housewife would have to buy elsewhere if she cared to confine her purchases to the markets. It has been estimated that 50,000 persons visit Lexington Market on Saturday.

The markets affect the output of the outlying farms. The Baltimore markets, as already stated, were established before the incorporation of the city, when Baltimore Town was in its infancy, and

the markets have grown up with the city, and the farmers have grown up with the markets. It has been estimated that 90 per cent of the truck farmers or growers in the outlying districts from Baltimore bring their products to the Baltimore markets. The farmer who does this always has ready cash for his produce and this is no little inducement to him.

Constructive measures. This is a very difficult question to answer without a great deal of study and personal investigation, neither of which in our limited time and with the pressure of other official duties we can give. We sometimes feel at Baltimore, particularly in view of the need for modern sanitary structures to replace the antiquated sheds, that the city would be better off, financially at least, if the municipal markets were owned by private corporations, subject to municipal regulation. The market people, however, and perhaps the public also, would never consent to this. Again we feel it might not be a bad idea if the city had a head market master or market commissioner whose sole business was to manage the markets, to devote his time exclusively to the work, to be a practical, efficient official, to study the situation from every conceivable standpoint and to go into the proposition in the same way that would be required of a manager of a private corporation. As the matter now stands, the city comptroller is in charge of the markets, and, being the chief financial officer of the city, a member of the board of estimates, the board of awards and several other boards and commissions, and having charge of the harbor masters and the inspectors of weights and measures, it is impossible for him, with his multitudinous other duties, to devote a great deal of his time to the markets. Our markets have been allowed to go along on the "let well enough alone" principle for several decades. We believe we are now facing changes, let us hope for the best interests not only of the market people, that is, those who sell in the markets for profit, but for the taxpayer and the public at large. Some of the market people have seen fit to petition the courts to enjoin the city from carrying into effect the provisions of the new market ordinance, approved in July, the chief objection being on the part of the butchers, to an increase of \$17 per stall per annum in the total charges demanded by the city, namely, from \$25 to \$42 per stall per annum.

We are wrestling today with the problem of the constructive measures that should be taken to further the municipal markets at

Baltimore. It is a big problem, so big that we want to be absolutely sure of our ground before acting. We believe, however, that we have taken one proper step in the passage of the ordinance to change, to some slight extent, the present license fee, the increased revenue to go back into the markets by way of new improvements, to place the cleaning of the markets under the exclusive supervision of the commissioner of street cleaning, and to give the board of estimates authority to regulate the rentals as many inequalities of years' standing are known to exist. Other changes and improvements will be undertaken from time to time as may seem advisable. We are about to let a contract for the enclosing of one of the markets, in glass, to improve the sanitary conditions. This will be an experiment and we shall watch the results carefully. It is not unlikely that a commission will be appointed at an early date for the purpose of thoroughly studying market conditions to the end that improvements may be made wherever advisable. Changes in the centers of population have often made a once popular market a heavy liability upon the city and when such a condition confronts us, ways and means must be devised to remedy conditions.

That public markets tend to reduce the cost of living goes without saying. It is unquestionably so at Baltimore. Government statistics show that Baltimore is one of the cheapest cities in the United States in which to live.

III. MUNICIPAL MARKETS IN CLEVELAND

BY CHARLES KAMP,

Market Master, Cleveland, Ohio.

There are three municipal markets in Cleveland. The Central Market is located in the downtown section and is readily accessible to twelve car lines. In connection with the market building there is a curbstome market, covering two and one-half miles of territory. Its tenants consist of 1,262 growers and producers and about 400 hucksters. The growers sell many products in a wholesale way, but also retail after 6 a.m. One street, near the various car lines, has been set aside for the meeting of retail producer and consumer. About 150 growers use this street. The New West Side Market, an exclusively retail market, and undoubtedly the finest municipal market building in this country, is located on the west side of the city. In this market there are 110 stalls and about 250 dealers selling from the curb outside the market. About 150 growers dispose of their goods at this market. A very modern storage plant is operated in the basement. The Broadway Market, also retail in its business, is an outlying market with 45 tenants.

As should be the case in all municipal markets, the stall rentals in the municipal markets of Cleveland are very low. High rents destroy the purpose for which markets are intended. The rents, varying as to location, range from \$15 to \$50 a quarter (three months), the \$50 stands being a few choice corner locations. The grower pays \$10 a year—an amount sufficient to cover the cost of cleaning. The curb huckster pays \$25 per year.

Until last year, the profits to the city from the operation of municipal markets amounted to \$20,000 annually. Due to the costs incident to operating the New West Side Market, earnings have been decreased to \$10,000 yearly.

There is a double inspection of weights and measures and also of foodstuffs. The city sealer inspects the weights and measures weekly. There is also a daily inspection by the force under the market master. The health board provides a meat and a sanitary inspector daily. A close watch on food products is also kept by the

force under the market master. Of particular mention is the type of scales used in the markets—a 15-inch double dial scale with large figures upon the dial. This scale must be hung so that one side of the dial faces the customer and the other side the dealer.

The markets of Cleveland are frequented by over 1,300 farmers and about 900 professional retailers. One great difficulty that has been experienced with direct selling by farmer to consumer has been the unwillingness of the farmer to spend the time at the market requisite for the disposal of his products. He is anxious to get back to the farm, and oftentimes forceful measures must be resorted to in order to make him retail his goods. The city can issue a license permitting him to wholesale but specifying also that he must retail. The position of Cleveland in this regard, however, is particularly fortunate. There is an immense farming vicinity round about the city, and the farmer is forced, therefore, to depend upon the retail trade for the disposal of the immense loads he takes to market.

The officials in connection with the markets are a market master, at a salary of \$1,800 per year, an assistant market master, at \$1,200 per year, and an inspector at \$900 per year. Within the last two years, these positions have been placed under civil service. Formerly the officials were appointed by the mayor for a term of two years. The market master and his assistant should have several years of actual market experience, making them conversant with general conditions and the tricks prevalent in the marketing trade.

Producers' prices are, of course, regulated by supply and demand. The farmers dispose of 95 per cent of their products in the markets. There has been a consequent lowering in the prices which consumers pay. In vegetables and fruits a saving of 100 per cent has been secured, and a conservative estimate would place the amount of saving at 50 per cent. The saving on meats and dairy products is approximately 15 per cent. It is evident that a well regulated market will have an effect not only upon the immediate radius of two or three miles round about, but upon the whole city as well.

The curb dealers make the sale of fruits their specialty and vast quantities are sold. There are over 200 meat dealers in the markets. One pork dealer in the Central Market sells two tons of pork every Saturday. Two cents per pound is the top margin of profit he makes on any sale and one and one-half cents per pound is his usual profit.

A proof of the attitude of farmers toward the municipal markets of Cleveland is found in the large number who bring their products to market.

As to constructive measures that should be taken to further the municipal market as an agency in direct distribution, the following may be mentioned: the municipal market should be in a location which is readily accessible to most of the car lines of the city. Low rentals should be charged. No telephone or delivery service should be allowed. Telephones are destructive of all principles for which markets are intended. A direct accompaniment of the telephone is the delivery service and oftentimes the credit system, and thus the fundamental principle for which the market was established—the saving of money to the public by minimizing all sources of expense in the way of costly service—is destroyed. The custom of giving trading stamps should be prohibited in the markets. Whatever donations are to be given should be given in prices to the people. The strongest kind of discipline should prevail in so far as honest dealing by the market dealers is concerned. The public should be able to come to a market with utmost confidence and make their purchases. It might be suggested, in this connection, that no leases be given to stall holders so that the official in charge might vacate the stall of any dealer who failed to deal honestly with the public. Good food inspection is also very essential to the success of a municipal market.

IV. THE INDIANAPOLIS MARKET

BY ANNIS BURK,

Secretary to the Mayor of Indianapolis, Ind.

The impression prevails in many places throughout the country that the Indianapolis Market is the outgrowth of Mayor Shank's efforts to reduce the high cost of living and that the city is engaged in the buying and selling of food products. While it is true that the mayor purchased great quantities of potatoes and other food products and sold them to the poor at prices lower than those demanded by regular dealers, he is not engaged in this business regularly and in no way has the city recognized his efforts as a municipal undertaking. In fact the market is as old as the city itself. There is only one in Indianapolis and consequently it is one of the largest in the country. On an average, eight hundred dealers and producers transact business there on market day.

The market is both wholesale and retail. Much of it is under roof but many producers occupy space along the curbs of adjacent streets. The charges for stands vary and are based on the size of the stalls, averaging from \$30 to \$125 per year for those inside and from \$20 to \$30 per year for desirable locations outside of the buildings. All of the expense of operating the market is paid by the city and the net profit averages from \$15,000 to \$20,000 a year. It is operated under a city ordinance, is under the supervision of the department of public safety and in direct charge of a market master and his assistants, appointed by the department. It formerly was the custom for the market master to issue bulletins but this practice has been discontinued.

Both retailers and producers have stands on the market but preference is given the latter. Every inducement is offered the producer in the way of cheaper rents and choice location. The market is open Tuesdays, Thursdays and Saturdays and is visited by all classes of citizens. Everything in the edible line is on sale and prices generally are a shade lower than those asked at grocery stores.

V. THE MILWAUKEE MUNICIPAL MARKET

BY LEO TIEFENTHALER,

Municipal Reference Librarian, Milwaukee, Wis.

Milwaukee has one large market. It occupies half of a city block and is approximately 400 feet long and 150 feet wide. The site is a grant to the community made in 1835 by the owners of the property when the land was platted. It was used as a wood and hay market for many years, but gradually developed into a market for truck and garden produce. It is still, however, being used as a hay market. In 1906 a canopy or protecting roof was erected along three sides of the market for the accommodation of the farmers and gardeners. The space beneath this canopy and in the interior is divided into stands or stalls. The farmers and gardeners rent these by the year or day and sell directly from the wagon. Except for a sale of hay, for which a definite time is set apart, it is strictly a market for garden truck. No fish or meat is sold, nor are there any counters or booths.

The charges for the rental of a stand or stall vary, being \$20, \$15, \$10, or \$8 per annum, according to the location of the stand or stall. The charge for rental by the day is twenty-five cents. This is the only financial obligation placed upon the farmer and truck gardener. The income from the market, which includes the receipts from rentals and charges for weighing on public scales, exceeds the yearly cost of maintaining the market. In 1908 the profit was \$1361.31; 1909, \$1280.10; 1910, \$1330.20; 1911, \$1063.75; 1912, \$1444.74; and it will exceed \$2000 in 1913. This does not take into account the cost of the erection of the canopy above mentioned, which was approximately \$3500.

Only farmers and truck gardeners are permitted to sell at the market. This regulation is strictly enforced. The problem with the Milwaukee market is to encourage the consumer to patronize it. Up to two years ago it was practically a wholesale market. Hucksters, who disposed of their goods from door to door, and grocers patronized it mainly. At that time a very small percentage of the goods was sold directly to the consumer. Through the efforts of those interested in the market and the publicity given it by the press,

the percentage of the goods sold to the customer has greatly increased and is continuing to increase. On a certain Saturday during August by actual count 3246 consumers visited the market, 360 of whom were men. On that day 249 loads of produce were brought to the market. There are in all 178 stands. All of these are rented by the year and are occupied with the exception of a row facing an alley, which is rented by the day and reserved for wholesale trade.

The market is under the supervision of the sealer of weights and measures and in direct charge of the market master. The present incumbent of the sealer's office has had wide experience in the commission business. No qualifications are required for the market master in the ordinance governing the market. He holds office for three years and receives a salary of \$900.

It is difficult to determine the effect of the market on the general prices throughout the city of those commodities which are offered at the market. The city is large, and the market reaches but a small proportion of its population. With the increasing popularity of the market, however, grocers are beginning to object to the activities by the sealer. This may be taken as an indication.

Last fall a curb market was established on the south side of the city in a densely populated district at the intersection of certain important streets that lead into the outlying country. It was this spring and gives promise of future growth.

Milwaukee is favorably situated for the further development of the market idea. The outlying district is admirably adapted to the raising of garden produce. Truck gardeners maintain their farms close to the limits of the city. The city itself is rather compact and covers a comparatively small area. Truck gardeners and farmers, therefore, find it profitable to bring their produce to town by wagon and to dispose of it directly to the middleman or consumer. Very little of the common garden produce is brought into the city by rail. On the other hand, a large percentage of the population of Milwaukee is of foreign birth or parentage. The Germans and Poles are strongly represented and readily take to direct marketing.

What municipal market policy Milwaukee shall pursue is a mooted question. Two plans are advocated, one to develop the present central market by the purchase of adjoining property, the other, to establish smaller neighborhood or even curb markets on public areas in heavily populated districts.

VI. MUNICIPAL MARKETS IN PHILADELPHIA

BY ACHSAH LIPPINCOTT,

Clerk of Markets, Philadelphia.

Municipal markets in Philadelphia are not new. In colonial days Philadelphia was distinguished for its long rows of market buildings and for the general excellence of its marketing facilities. As early as 1683 there was a city market house, and in 1736 records show that councils endeavored to get control of the ferries in order to bring the products of Jersey to the Philadelphia markets.

At that time the principal markets were on High Street, now called Market Street, in the vicinity of the Court House. In a poetic description of High Street, written in 1729, the Court House and adjoining markets are thus described:

Through the arch'd dome and on each side, the street
Divided runs, remote again to meet.
Here, eastward, stand the traps for obloquy
And petty crimes—stocks, posts and pillory.
And twice a week, beyond, light stalls are set,
Loaded with fruits and flowers and Jersey's meat.
Westward, conjoin, the shambles grace the court,
Brick piles their long extended roof support.
Oft, west from these the country wains are seen
To crowd each hand and leave a breadth between.

None of these buildings is standing today.

Unfortunately Philadelphia's once well developed market system, like that in other American cities, has not kept pace with the development of modern industries. The world has progressed with discoveries of all sorts to benefit the human race and much has been done in the physical upbuilding of cities in many respects but the local marketing and distributing facilities seem to have been overlooked.

Little or no effort has been made to solve the problems of distribution in such a way as to encourage the farmers in the outlying agricultural districts to accommodate their productions to the needs of the local market nor indeed even to ship their produce to city markets.

The efficient distribution of Philadelphia's food supply is a tremendous problem which is just beginning to receive its due attention. Director Morris L. Cooke, of the Department of Public Works, is giving the matter his serious thought. He has recently appointed a clerk of markets in the bureau of city property who has the supervision of existing markets; of the location of new curbstone and municipal markets, and who is to make inquiry into possible steam, trolley and motor boat development that will tend to expedite and cheapen the distribution of foodstuffs.

Philadelphia's most powerful agents of local distribution, namely trolley freight, good roads, motor trucks and motor boats, are to be more thoroughly developed. What is most needed is some means by which the farmers within a radius of fifty miles can get their goods to the city markets as quickly and cheaply as possible. The farmer's time is valuable and if it is necessary for him to take two or three days of every week to market his goods, can we blame him for selling to the wholesale buyer in order to save time? Just this state of affairs is what makes the city consumer pay such high prices for foodstuffs.

When Philadelphia has a waterfront terminal market and trolley freight depots at the municipal markets, then it will be possible to see the advantages of direct marketing.

The two municipal markets at North and South Second Street are financially successful. The receipts for 1913 from the five hundred stalls rented up to September first, were \$17,078.25. However the success of municipal markets must not be reckoned in terms of profit, but rather in terms of the number of bona fide farmers and consumers frequenting them.

Both farmers and professional retailers are to be found in Philadelphia's markets. Unfortunately most of the farmers frequenting the markets sell only at wholesale and have left the market before the consumer arrives there. Again the question of time enters into the matter—the farmer is not willing to take the time to retail the large quantities of his goods in the height of the seasons.

This fact emphasizes the necessity of having well organized, wholesale municipal markets. There should be a large wholesale market to which the farmer could ship his produce directly. If the farmer is assured of a steady demand and of a reliable market for his products he will raise more and be able to sell at more reasonable rates. But in selling directly to the consumer the farmer must pay

more attention to the quality and standard of his goods. The sorting and repacking of goods are among the expensive services rendered by the middleman, which can be dispensed with. The service of a large municipal market, such as Philadelphia should have, is to eliminate unnecessary handling and to make a direct communication between the producer and the consumer, thus reducing the cost to the consumer.

In order to encourage reliable farmers to frequent the municipal markets, a concession is made to them in that they are not required to pay more than twenty dollars per year rent for stalls in the markets. If they are not bona fide farmers they must procure venders' licenses and be subject to mercantile appraisalment. Further concessions should be made, and, most important of all, bulletins should be issued which would keep the producers posted on city market prices. It is the present plan to work up such a bulletin for the guidance of the farmers.

There are three phases in the logical development of a market: first, the curbstome market; second, the open shed; and third, the modern enclosed market house. Strange as it may seem, Philadelphia's municipal markets are in the second phase—namely open sheds. The North and South Second Street markets are all that remain to us of Philadelphia's once well-developed market system. These markets were built in 1785 and 1745 respectively, and, with the exception of the addition of sheet iron roofs, cement floors and the systematizing of the numbering of the stalls, they stand as they were built. Plans are under way for the general improvement of these markets along the lines of water supply, drainage and other conveniences.

It would be practically an easy task for Philadelphia to establish new municipal markets in different sections of the city, but the vital question is, can we, in this day of the telephone and the corner grocery store, bring back the old custom of marketing? Since the corner grocer has come to stay, as he undoubtedly has in some sections of the city, it would seem that the city's next step should be to facilitate wholesale buying and distribution. Foreign cities have proved the advisability of such a system. Let Philadelphia be the first American city to adopt the improved market system, and to develop to the fullest extent the powerful agencies of local distribution at its immediate disposal.

VII. THE ROCHESTER PUBLIC MARKET

By W. W. MERRILL,

Market Master, Rochester, N. Y.

The Rochester Public Market is both wholesale and retail, but nearly all sales whether to consumers or otherwise are in wholesale quantities. Perishable goods are sold daily, but most of the trading is done on the three market days, Tuesday, Thursday and Saturday. Stalls are rented at \$40 a year, and this carries with it the right to sell anywhere on the streets of the city. Stalls are rented also by the week for \$1.50, and by the day for 25 cents, but at present this gives no license to sell away from the market. State regulations as to adulteration, misbranding, weights, measures, food deterioration, sanitary conditions, etc., govern the market and there are policemen and city sealers constantly in attendance to enforce them.

About as many hucksters rent stalls by the year as farmers, but on market days there are always many more of the latter, who take their stalls by the day or week. In all there is room for 1,200 wagons. Farmers and hucksters are allotted space in distinct sections of the market. This is in accordance with the farmer's wishes and encourages him to come here. As a rule he can dispose of his produce more advantageously in the market than outside, and needs no further inducement, but as has been said, he is not permitted to sell outside unless he rents his stall by the year. This, of course, prevents much direct marketing off the market.

All officials and employees are under civil service rules. The former consist of the market master and his assistant. No publications are issued, but reports of conditions and prices appear in all the newspapers daily. Prices are influenced to some extent by the prices in other markets, especially New York, but are determined mostly by local conditions and the law of supply and demand.

There is nothing peculiar about the working of producer's and consumer's prices here. The former tries to get as much as he can, and the latter to pay as little. On the whole the former has benefited by the market, and it is probably true that, without the facilities afforded by the market for sale and distribution, the consumer would be paying considerably more. All our foodstuffs are of high quality.

There is too much competition for it to be otherwise. Practically everything brought in is perishable and must be sold quickly. The market has induced many in the immediate vicinity to turn their land to raising produce, but the percentage of increase in the output is not large, for this entire section is largely devoted to gardening and has been for over fifty years. No particular adaptation of produce to the city's needs was necessary, for every kind of vegetable and fruit suited to this climate is raised within ten miles of us.

Because the market is partly wholesale, business must be done too early in the morning for the patronage of the average housewife. Those living in the vicinity, however, come here regularly, and others come whenever their purchases are to be large enough to make their saving material. In a city of this size it is impossible to have the market immediately accessible for everybody, but the situation has been met as best it can be, with the result that our attendance is several thousand daily.

A QUESTIONNAIRE ON MARKETS

By JOHN W. FARLEY,

Chairman of Committee on Investigation of Municipal Markets,
Memphis, Tenn.

Memphis is superior to other cities for assembling raw material for manufacturing and equal in facilities for distributing manufactured products. These advantages and facilities, however, are secondary to labor. If this city is to compete with manufacturers in other cities, the cost of labor must be reduced to a minimum.

The best development of Memphis, as of any city, is also dependent upon increasing the prosperity of the surrounding agricultural communities, thereby increasing their purchasing power. With our already excellent system of good roads, producers could easily reach the proper market place if wise facilities and regulations were established.

The question was raised whether both these ends could not be furthered through municipal markets. To study this question a special committee was appointed by the Commission Government of Memphis.¹ In order to get together the facts as to the results obtained by markets in other cities, and as to the proper regulations and facilities for such markets, should Memphis decide to adopt a market policy, the following questions were sent to the dozen cities indicated. These questions and their answers are submitted here for the use of administrative officials who may have similar queries in other cities, and for their value to all students of the market problem.

¹ The other members of the committee are: Charles E. Brower and John L. Parham. Because of its exceptional value to those interested in furthering or developing markets, those pages of this committee's report dealing with the answers to the questions sent out by them are reprinted here. It is regretted that the entire report cannot be published. The part published here is, the editors believe, of significant value to all who have practical market problems to solve, and to all students of direct marketing.—THE EDITOR.

1. Name of city and population and name of official giving information.

Baltimore, Md.: population 558,489; Jas. H. Thrift, comptroller.

Cincinnati, Ohio: population, 540,000; Theo. Braken, superintendent public lands and buildings.

New Orleans, La.: population, 360,000; Alex. Pujol, commissioner of public buildings.

San Antonio, Texas: population, 105,000; J. H. Parker, city market master.

Seattle, Wash.: population, 254,000; J. E. Crichton, commissioner of health.

Norfolk, Va.: population, 81,524; Wm. Hanna, chairman board of control.

Boston, Mass.: population, 675,000; Geo. E. McKay, superintendent of markets.

Montreal, Canada: population, 600,000; J. E. A. Biron, superintendent of markets.

Rochester, N.Y.: population, 235,000; Edwin A. Fisher, city engineer.

Indianapolis, Ind.: population, 275,000; Jno. B. Wood, secretary board of public safety.

Columbus, Ohio: population, 200,000; Chas. E. Reinhard, superintendent of markets.

Dubuque, Ia.: population, 40,000; F. A. Gniffke, ex-city treasurer.

2. How long has your market been established?

Baltimore: Established before incorporation of city. Ground bought in 1804; stalls rented by the year in 1811. Cincinnati: 1850. New Orleans: As old as the city. San Antonio: 12 years present market, but have had a city market 150 years. Seattle: 5 years. Norfolk: Present location a little over 20 years; prior to that a market was established many years ago on large public square leading to ferry connecting this city with the city of Portsmouth, maintained for many years. Boston: Two buildings separated by a street eighty feet wide; both buildings known as Faneuil Hall Markets; smaller building erected in 1742, gift from Peter Faneuil. In 1826, the larger building known as Quincy Market was opened. The smaller closed and not reopened until 1857, when more room was necessary. Montreal: At present there are five meat and provision markets, one of which is known as the Bonsecours Market, established in 1845. Rochester: Since June 1, 1905. Indianapolis: Since beginning of city. Columbus: 62 years. Dubuque: Between 75 and 80 years. The time of its beginning is rather indefinite.

3. Does the city own or lease the market places?

Markets are municipally owned in all these cities.

4. How many market places in your city?

Baltimore: 11 retail and 1 wholesale fish and 1 wholesale produce. Cincinnati: Four. New Orleans: Thirty-three. San Antonio: One general mar-

ket place. Seattle: Two. Norfolk: One controlled by the city. Boston: One public market place and perhaps 2,000 places where meats and provisions are sold. Montreal: Five meat and provision markets as well as one hay and two cattle markets. Rochester: One. Indianapolis: One. Columbus: Four. Dubuque: One.

5. How is the market controlled?

Baltimore: By the city comptroller, power vested in him by the ordinances of the mayor and city council, giving him right to collect rents and licenses. Cincinnati: Superintendent, chief market master, assistant market masters and watchmen. New Orleans: Inspectors. San Antonio: Market master under mayor. Seattle: Department of health and sanitation. Norfolk: Superintendent of markets under rules and regulations prescribed by the board of control. Boston: Ordinance. Rochester: Market commission. Indianapolis: City ordinance and under the board of public safety. Columbus: Director of public service and superintendent of markets. Dubuque: Market master who receives \$65 a month.

6. What is the value of the property used for the market?

Baltimore: All the markets over \$1,000,000. New Orleans: Hard to approximate. San Antonio: \$100,000. Seattle: Value not given. Norfolk: Land and buildings \$358,000. Boston: For taxable purposes and establishing rents, \$1,800,000. Montreal: \$570,000. Rochester: \$191,000. Indianapolis: About \$1,000,000. Columbus: About \$300,000. Dubuque: About \$10,000.

7. What is the cost of operation?

Baltimore: About \$20,000, exclusive of repairs. Cincinnati: About \$12,000, but we get this back and make some more from the licenses. New Orleans: \$9,000 per year. San Antonio: About \$600 per month. Seattle: \$265 per month. Norfolk: \$2,920 per year. Boston: About \$12,000, not including repairs. Montreal: Cost of operation, including repairs will amount this year (1912) to \$35,665. Rochester: For the year 1911, \$6,172.01. Indianapolis: About \$15,000 yearly. Revenue about \$35,000. Columbus: About \$21,000. Dubuque: Practically nothing. While the market master draws a salary, he serves as janitor of City Hall, one of the city's weighmasters and city jailer. The fees from stand owners pay for cleaning up after market hours.

8. What are the sources of revenue by which the market is supported?

Baltimore: Per diem receipts, rentals and licenses, varying according to the markets. Cincinnati: Licenses from people having stands in the markets. New Orleans: Daily fees from stall keepers for use of stalls. San Antonio: Rents in market building and rents from plazas (two squares) on outside, also fees for inspection of animals slaughtered. Seattle: 10 cents a day for stalls or tables. Norfolk: Rents collected for stalls and spaces. For year ending June 30, 1912, total of rent \$17,129.55. Boston: Rentals. Montreal: Rents

total for 1911, \$66,556.57. Rochester: Leasing of the stands. Indianapolis: Leasing of stands. Columbus: Rental of stalls and stands, and hall rent in market houses. Dubuque: The only revenue is the fee for the stands, total of about \$430.

9. *Do you have a building with stalls?*

Baltimore: All are covered and have stalls. Cincinnati: We have 4 buildings with stalls, also outside market. New Orleans: Yes. San Antonio: Yes. Seattle: Yes. Norfolk: Yes. Boston: Yes. Montreal: Each of the markets is provided with inside butcher's stalls, and outside stalls around same occupied by fruit and vegetable traders only. Rochester: 228 stalls are covered with a roof. Indianapolis: Yes. Columbus: Yes. Dubuque: Yes, but abandoned it for this use 30 years or more ago.

10. *If so, to whom are they rented, i. e., are they rented to producers or to persons who are simply merchants?*

Baltimore: Both. Cincinnati: Inside are butchers, cheese and butter men; outside all kinds of venders. New Orleans: Small merchants. San Antonio: Merchants and butchers. Seattle: To those who have a right under city and state laws to sell. Norfolk: Not to producers to any extent, chiefly to merchants or hucksters. Boston: Rented to merchants. Montreal: Parties known as traders only. Rochester: Rented to producers and hucksters. Indianapolis: Both. Columbus: Producers and dealers in meats, fruits and vegetables. Dubuque: Mostly to producers, a few to simply merchants.

11. *What is the average number of stalls rented?*

Baltimore: About 5,500 stalls. Cincinnati: All the market house stalls are rented always. New Orleans: Approximately 700. San Antonio: Inside 40; outside 75. Seattle: 200 at the most, usually 125 to 135. Norfolk: Stalls in butchers' market are much in demand and seldom vacant; in vegetable market 144 stalls and average number rented is 130. Boston: 132 stalls in the larger market and 44 basements, all occupied by tenants on a ten-year lease. Montreal: The number of stalls depends entirely on size of each market. Rochester: All—about 600. Indianapolis: About 675 inside; about 300 outside. Columbus: 690 stands and stalls. Dubuque: By the city about 50. In addition to this by private property owners on busy days (curbstone space) probably 500.

12. *What is the average number of wagons in the market from which produce is sold on market days?*

Baltimore: Perhaps 1,500. New Orleans: Vary greatly. San Antonio: About 75. Norfolk: On Saturdays 60 to 75; on other days varying from 1 or 2 up to 25. Boston: 300 to 450 wagon loads busy days; on almost any day duller part of year from 75 to 150 loads. Montreal: As high as 1,500 in one

market day at Bonsecours Market (the most extensive). Rochester: Busy season (peach) 1,200 loads every day; average 300 per day. Indianapolis: Average 150. Columbus: About 300, average 100. Dubuque: From 30 to possibly 600.

13. Are producers permitted to sell from wagons in the market? If so, on what terms?

Baltimore: Yes. Spaces rented for \$5 annually. Cincinnati: No. Unless they have a license, then they have to unhitch and stable their horses. San Antonio: 10 cents per day or \$2.50 per month. Seattle: No. Norfolk: Yes. They are required to pay 10 cents per day for single wagon; 15 cents for double. Boston: Producers sell wholly from their wagons. Montreal: Producers have only the right to sell from wagons at public market. Market fees on each are inserted in Article V, Section 48, By-Law No. 296, concerning markets. Rochester: Yes. Without extra payment. Indianapolis: No. Only outside. Columbus: No. Dubuque: All is practically sold from wagons by producers. No restrictions except payment of fee for occupying curbstone space and the universal rule that his wares must be wholesome, sanitary and come up to his representations and of legal weight and measure.

14. What is the average number of miles producers haul their produce to sell it in the market?

Baltimore: 8 to 10 miles. Cincinnati: About 15. New Orleans: 5 miles. San Antonio: About 6. Most of products are from gardens close in. Seattle: 7½ miles. Norfolk: Approximately 12 miles. Boston: There are on our roll some 1,200 farmers; some come only once or twice a year, others for two or three weeks. Many come for certain days in the week for six or seven months in year. Montreal: Between 8 and 25 miles. Rochester: 5 to 6. Indianapolis: 5 or 10. Columbus: About 25 miles. Dubuque: Some come 40 miles. Probably 15 might be fair average.

15. What do they do with the produce remaining unsold when the market closes for the day?

Baltimore: Take it back home or sell or give to the poor. Cincinnati: Sell to commission houses near market. New Orleans: Just enough is brought by each wagon as experience shows will be sold. San Antonio: Perishables are placed in refrigerators. Seattle: Taken back to their gardens outside city limits. Norfolk: If any considerable quantity, it is sold to commission houses. Boston: The farmers usually come from radius of 30 miles; occupy space in streets around market and adjoining streets when necessary; no charge is made for this; they remain all day and over night into following day if necessary to dispose of their produce; if necessary to go home before they dispose of everything, they leave it with commission merchants to dispose of. Montreal: Produce remaining unsold is taken back home. Rochester: Take it home or peddle it in the streets. Indianapolis: Sell it to commission men. Colum-

total for 1911, \$66,556.57. Rochester: Leasing of the stands. Indianapolis: Leasing of stands. Columbus: Rental of stalls and stands, and hall rent in market houses. Dubuque: The only revenue is the fee for the stands, total of about \$430.

9. *Do you have a building with stalls?*

Baltimore: All are covered and have stalls. Cincinnati: We have 4 buildings with stalls, also outside market. New Orleans: Yes. San Antonio: Yes. Seattle: Yes. Norfolk: Yes. Boston: Yes. Montreal: Each of the markets is provided with inside butcher's stalls, and outside stalls around same occupied by fruit and vegetable traders only. Rochester: 228 stalls are covered with a roof. Indianapolis: Yes. Columbus: Yes. Dubuque: Yes, but abandoned it for this use 30 years or more ago.

10. *If so, to whom are they rented, i. e., are they rented to producers or to persons who are simply merchants?*

Baltimore: Both. Cincinnati: Inside are butchers, cheese and butter men; outside all kinds of venders. New Orleans: Small merchants. San Antonio: Merchants and butchers. Seattle: To those who have a right under city and state laws to sell. Norfolk: Not to producers to any extent, chiefly to merchants or hucksters. Boston: Rented to merchants. Montreal: Parties known as traders only. Rochester: Rented to producers and hucksters. Indianapolis: Both. Columbus: Producers and dealers in meats, fruits and vegetables. Dubuque: Mostly to producers, a few to simply merchants.

11. *What is the average number of stalls rented?*

Baltimore: About 5,500 stalls. Cincinnati: All the market house stalls are rented always. New Orleans: Approximately 700. San Antonio: Inside 40; outside 75. Seattle: 200 at the most, usually 125 to 135. Norfolk: Stalls in butchers' market are much in demand and seldom vacant; in vegetable market 144 stalls and average number rented is 130. Boston: 132 stalls in the larger market and 44 basements, all occupied by tenants on a ten-year lease. Montreal: The number of stalls depends entirely on size of each market. Rochester: All—about 600. Indianapolis: About 675 inside; about 300 outside. Columbus: 690 stands and stalls. Dubuque: By the city about 50. In addition to this by private property owners on busy days (curbstone space) probably 500.

12. *What is the average number of wagons in the market from which produce is sold on market days?*

Baltimore: Perhaps 1,500. New Orleans: Vary greatly. San Antonio: About 75. Norfolk: On Saturdays 60 to 75; on other days varying from 1 or 2 up to 25. Boston: 300 to 450 wagon loads busy days; on almost any day duller part of year from 75 to 150 loads. Montreal: As high as 1,500 in one

market day at Bonsecours Market (the most extensive). Rochester: Busy season (peach) 1,200 loads every day; average 300 per day. Indianapolis: Average 150. Columbus: About 300, average 100. Dubuque: From 30 to possibly 600.

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bus: Take it home or sell it to some grocer. Dubuque: Keep reducing the price for bargain hunters. The commission houses and shippers and grocers usually take the surplus. The city absorbs nearly all.

16. Are the articles offered for sale inspected before sale by an official of the city?

Baltimore: Health department inspectors visit daily. Cincinnati: No. New Orleans: Yes. San Antonio: Yes. By meat inspectors and market master. Norfolk: Food inspector is always on duty to attend inspection of food products. Boston: The superintendent of markets and officials under him supervise all produce offered for sale and nothing allowed to be sold which is unfit for food. Montreal: No. But if found by the clerks of market during sale, unfit for consumption, or if attention is called by consumers, produce is immediately seized. Rochester: Yes. Indianapolis: Yes. By Board of Health officers. Columbus: Yes. Dubuque: Market master, police, state food inspectors are at all times, often in unexpected quarters, looking for violations of pure food laws. Convictions speedy, fines heavy.

17. What is the approximate value of produce sold on an average market day?

Baltimore: Hard to estimate; 50,000 people visit Lexington Market on Saturdays. Cincinnati: No way of telling. New Orleans: Impossible to say. San Antonio: About \$1,400. Seattle: Do not know. Norfolk: Impossible to answer. Boston: Unable to say. Montreal: Approximate value of produce in each wagon estimated between \$35 and \$40. Rochester: Cannot say. Indianapolis: About \$20,000. Columbus: About \$20,000. Dubuque: Extremes would vary between \$150 and \$8,000. The latter may be too low.

18. What is the average number of people who buy in the market on market days?

Baltimore: About 50,000 visit the markets. At least 25,000 buy. Cincinnati: 25,000 on ordinary days; 60,000 Saturday. New Orleans: Impossible to say. San Antonio: About 500. Seattle: Many thousands. Norfolk: On Saturdays probably 7,000 or 8,000. Boston: No means of knowing but would be reckoned by thousands. Montreal: Two classes of buyers, consumers purchasing at retail and proprietors of butcher stalls and grocers purchasing wholesale. Calculated by hundreds. Rochester: It is a wholesale market but about 300 people per day buy in the market. Indianapolis: On Saturdays it is always packed the whole day. Columbus: About 20,000. Dubuque: Impossible to approximate. Probably 3,500.

19. What classes of people buy in the market?

With the exception of Cincinnati and San Antonio the markets are frequented by all classes. In those cities the working class especially uses the market.

20. *What is the attitude of the general consuming public towards the market?*

Baltimore: Decidedly favorable. Cincinnati: A great benefit. New Orleans: Favorable. San Antonio: Favorable. Seattle: Very favorable. Norfolk: Very favorable. Boston: Generally very favorable. Montreal: Generally speaking, the public appreciate the markets, for their advantage is found in variety of produce offered for sale as well as in cost of same, which is less than what is asked for in shops, stores, etc., outside of the public markets. Rochester: Take very little interest in it. Indianapolis: Approval and favor. Columbus: Favorable. Dubuque: Great loyalty.

21. *Is the use of the market by the consumer increasing or decreasing?*

Baltimore: Bad weather is to blame for any decrease. Cincinnati: Difficult to find out. New Orleans: Stand-still. San Antonio: Increasing. Seattle: About stationary. Has brought about better conditions among groceries in city. Norfolk: Gradually increasing. Boston: Normal. Some retail trade scattered by reason of residents moving from market districts to remote sections of city and suburbs where they obtain supplies from local dealers, who by use of order carts and telephone can be supplied immediately no matter how small the order. Montreal: Population increasing and buyers increasing proportionally. Rochester, Indianapolis, Columbus, Dubuque: Increasing.

22. *What effect does the market have on the general scale of prices of food in your city in the way of reducing prices?*

Baltimore: Scale of prices is somewhat lower in the markets. Cincinnati: Reduces cost to people that pay cash but has no effect on credit buyers. New Orleans: Difference of opinion on that subject. San Antonio: Reduces prices as producer and consumer meet in the market. Seattle: Tendency to reduce prices in everything except meat. Norfolk: Prevents raising of prices by grocery stores by facilitating operation of the general law of supply and demand. Boston: Cannot say that it has any unless consumer buy from producer by the box or barrel. Nothing sold in market but best grades of meats and provisions, and price of this quality is cheaper than in local markets. Montreal: Buyers generally pay less at markets than in shops, stores, etc. Rochester: No appreciable effect. Indianapolis: Can be bought cheaper and fresher at market. Columbus: It keeps grocers and other dealers in produce and fruits in check from taking advantage and boosting prices. Dubuque: Keeps prices down very materially.

23. *Is the producer using the market to sell his produce more or less than formerly?*

Baltimore: More. Cincinnati: More volume of business but might be due to increased population. New Orleans: Producers sell to stall keepers

largely. San Antonio: More. Seattle: More. Norfolk: Slightly more than formerly. Boston: Number of producers not materially changed. Montreal: There are no other ways for producers to sell their produce on the markets; they may, however, consign to commission merchants. Rochester: More. Indianapolis: More. Columbus: Some less. Dubuque: More.

24. Do you consider the market a very potent factor in keeping down the cost of living in your city?

Baltimore: Yes. Cincinnati: Yes. New Orleans: No. San Antonio: Somewhat. Seattle: It undoubtedly assists in lowering cost of living. Our markets are not large enough to have a very appreciable effect. Norfolk: Yes. Boston: See answer to 22. Montreal: Yes, by fact that the producer can offer his produce for sale direct to consumer, avoiding then every possible understanding which may exist between merchants respecting sale prices. Rochester: No. Indianapolis: Yes. Columbus: Yes. Dubuque: It undoubtedly is.

25. What is the average distance people will walk to buy in the market?

Baltimore: They don't have to do much walking; trolley cars pass each of the 11 markets and the 11 markets are scattered about city, serving all sections. Cincinnati: All car lines transfer to market and people will come at least 1 mile on foot to market. San Antonio: About 6 blocks. Seattle: Not more than a half mile. This is a very hilly city and the nickel is our smallest money. Norfolk: Market is centrally located and people come from all parts of city, and even from outside city limits to deal in the market. Boston: Unable to say as our people are inclined to use public conveyances, all of which come close to market district. Montreal: The markets being scattered about the city, the distance to walk to reach them is slight. Rochester: $1\frac{1}{4}$ miles. Indianapolis: All over the city. Columbus: Markets can be reached by street cars but some will walk from 7 to 10 blocks. Dubuque: Compactly built city. More people to the square mile than any other city in the state. Nineteen blocks at farthest will take you among the producers.

26. How many people depend on the market for supplying their daily needs?

Baltimore: See answers to 17 and 18. More people on Saturday than other days. Groceries are not sold in markets, so the public must always depend on grocers. Cincinnati: No way of telling. New Orleans: Almost the population. San Antonio: Probably 3,000. Seattle: Impossible to state. Norfolk: Difficult to estimate; probably 10,000. Boston: Have no means of knowing; a large number. Montreal: About half of population. Rochester: Wholesale market about 300. Indianapolis: Very few families in our city who do not attend market at least one day in the week. Columbus: 75,000. Dubuque: Practically entire city. The grocers keep vegetables but they must meet

gardeners' and farmers' competition because they must buy in the same market and sell at same prices. Their profits come from buying larger quantities and giving their merchandise in barter for farm products.

27. Is the number decreasing or increasing?

Baltimore, Cincinnati, San Antonio, Norfolk, Montreal, Rochester, Indianapolis, Columbus and Dubuque: Increasing. Seattle and Boston: Normal.

28. How far is your principal market place from the center of the business district?

Baltimore: We have 11 markets; one, Lexington Market, is in heart of city shopping district. Cincinnati: Four squares. San Antonio: $\frac{1}{2}$ mile. Seattle: Three blocks. Norfolk: It is in the center. Boston: In center of business district, surrounded by provision stores for radius of $\frac{1}{2}$ mile. Montreal: Principal market, Bonsecours Market, is situated in center of business district. Rochester: $1\frac{1}{2}$ miles. Indianapolis: Within 2 blocks and directly opposite County Court House. Columbus: 2 blocks. Dubuque: Between 3 and 6 blocks.

29. What is the attitude of the commission merchant toward the retail market?

Baltimore: Of course the commission merchant for his own selfish interests would do away with anything that interferes with his profits but our markets were established before the commission merchant opened up his business. Cincinnati: They have stands in it and use it as an outlet for their perishable goods. New Orleans: Favorable. San Antonio: Friendly. Seattle: No outward evidence of antagonism at this time. It must injure their business, however. Norfolk: Favorable to the market. Boston: Favorable. Montreal: They are in no way connected with markets. Rochester: Very friendly. Indianapolis: Does not meet with their approval. Columbus: Very amicable. Dubuque: Suppressed hostility. They view it as an evil that must be endured. It gives them a good place to buy for outside orders.

30. What is the attitude of the huckster toward the market?

Baltimore: See 29. Cincinnati: Same as commission merchants. New Orleans: Unfavorable. San Antonio: Friendly, as they do most of their buying at market. Seattle: Rather antagonistic. Norfolk: The renter of vegetable market stalls is called a huckster. Your question probably refers to what we call a peddler, i. e., a man who buys his goods from commission houses and peddles them through the streets. Of course, the latter is opposed to the market. Boston: Favorable as at a time of a surplus of provisions he purchases at low prices which enables him to dispose of same at a profit. Montreal: Their only business connection with the market consists of buying their necessary supplies which they subsequently sell throughout the city. Rochester:

Unfriendly. Indianapolis: Favorable. Columbus: The country huckster is the one that stands on the market and the city huckster is not very favorable to the market. Dubuque: It is his paradise. He has his stands here.

31. *Is the huckster permitted to peddle during the hours the market is open?*

Baltimore: Not within prescribed limits. Cincinnati: Not in the market unless he has a license and then he must unhitch his horses and remain in one place. San Antonio: Not within 6 blocks. Seattle: Yes. Norfolk: Peddler is probably intended here. The peddler is not restricted as to hours. Boston: He is permitted to sell anywhere in the city if he has a license (except in the market limits). No person is permitted to occupy space allotted to the farmers unless he is a producer. Montreal: Yes. Rochester: Any time after 8 a.m. Indianapolis: Yes. Columbus: The huckster is permitted to sell his produce at a stand on the market providing he pays stand rent. Dubuque: Yes, he is, but the peddling huckster is an almost unknown person in Dubuque.

32. *What is the attitude of the corner grocer towards the market?*

Baltimore: See 29. Cincinnati: They all market every day. New Orleans: Hostile. San Antonio: Friendly. Seattle: They seem to believe it is an infringement on their business prerogative. Boston: The same as would be toward any one carrying on business in competition. Montreal: They buy at the markets all the farm produce they require for the necessary supply to their customers. Rochester: Not very friendly. Indianapolis: Decidedly against it. Columbus: Not very favorable. Dubuque: The grocer looks on it as a great wrong to the business man who has rent to pay, etc.

33. *What are the principal criticisms of your market and by whom made?*

Baltimore: Perhaps the necessity of providing new building and general improvements desired by the public and the market people. Cincinnati: Some people that own property in place dedicated to market purposes do not like the noise. Some vendors do not like to pay license. New Orleans: Political. San Antonio: Do not know of any unfriendly criticisms as market has been in operation 150 years. Seattle: That it is not really a cheaper place in which to buy produce; that the men selling take undue advantage of purchaser, and in the rush work off less wholesome food. Norfolk: The vegetable market is a frame building, and there is a general feeling that a building of better construction should be provided. Boston: So far as its size is concerned, opinion of persons visiting from other states, foreign countries and people of our own city, is that it is the best conducted market they have ever seen. Montreal: The only inconvenience the public have to complain of concerning the principal market, which is the Bonsecours market, is that the space reserved for the farmers and the public as well, is too exiguous. Rochester: By grocers, because market gardeners sell at retail. Indianapolis: Only from those under-sold.

Columbus: When they get short weight or measure or when they buy goods that are represented as first class and prove not to be so. Dubuque: There are no criticisms. This is a broad statement but true. Grocers and commission men have a grievance but no criticism.

34. Is there a general cold storage plant operated in connection with the market?

Baltimore, Cincinnati, San Antonio, Seattle, Norfolk, Rochester, Dubuque, Columbus: No plant. New Orleans: In one market, yes. Boston: We are supplied with brine cold storage which is conducted through pipes to the market from a building about an eighth of a mile distant. Montreal: Refrigerating system is now in course of installation for the use of all the tenants of the Bonsecours Market. Indianapolis: In the meat market, yes.

35. Would you advise the establishment of one?

Baltimore: Have never considered it. Would never advocate it under control of municipality as this should be a private rather than a public enterprise and to establish one here would be in competition with existing corporations. Cincinnati: Certainly do. New Orleans: Yes. San Antonio: Yes. Seattle: It would depend on the financial status of the city, the wholesomeness of goods sold in the grocery stores, and the profits grocerymen are making. Norfolk: Yes. Boston: Yes. Montreal: Yes. Rochester: Yes. Indianapolis: We know it is a success and if closed would raise a great howl. Columbus: Yes. Dubuque: Yes, wherever possible.

36. What are the best features about your market from the consumer's standpoint?

Baltimore: Fresh goods, low prices. Cincinnati: Fresh goods and cheaper but cash prices. New Orleans: That best food is obtained at a minimum. San Antonio: Consumer meets producer and has a good market to select from. Seattle: Nearness to business center and to big truck gardens. The control over food products by law by health department. Norfolk: It regulates the prices charged by stores. Rochester: It furnishes an opportunity for the producers to bring their produce to one place and deal with the consumer either directly or through grocers. Columbus: The consumer's standpoint is that he has a larger and greater variety to select from. Dubuque: The consumer and producer have a free and unrestricted market to buy and sell.

37. What are the best features about your market from the producer's standpoint?

Baltimore: Quick sales, ready money. Cincinnati: Sells more at a smaller price but gets cash. San Antonio: Producer meets consumer with resulting elimination of middleman. Seattle: Nearness to business center and big truck

gardens. Norfolk: It is of great assistance to him in disposing of his produce. Montreal: See 36. Rochester: See 36. Columbus: From the producer's standpoint, he gets a better price than he would receive from the grocer or commission merchant as the middleman's profit is divided between consumer and producer. Dubuque: See 36.

38. If you were establishing a market in your city, what are some of the most important features you would incorporate into it?

Baltimore: We would seriously consider the question of open or closed market. Cincinnati: Have the space clearly defined; the class of people allowed to peddle free of charge, defined; collect rents in advance; pick a wide street so there would be no blocking of traffic; see that it is kept in a sanitary condition. New Orleans: Cold storage plant thoroughly screened—cleanliness—with small daily fees to be dedicated to repairs of markets. San Antonio: Cleanliness, plenty of room, cheap rents, and conducted so as to be just self-sustaining. Seattle: Nearness to the greatest number of people; proper sanitary arrangements of stalls, buildings; properly paved and drained streets; properly lighted, with unusual abundance of water for all purposes and a proper ordinance giving authority for control and to make rules and regulations. Norfolk: The system as it has existed in Norfolk has proven very satisfactory, but the butchers' market should be equipped with cold storage plant. Boston: Should construct it on same plan, give more space to each stall and provide cold storage in the building to supply each tenant; would enforce the regulations to the letter and spirit; allow no influential dealer to have the ear of some person on the board of management; would select as superintendent a person known to be thoroughly competent for the position; pay him a salary sufficient to justify him in having no friends to whom he might show favoritism, and if making a ruling in accordance with the regulations support him in carrying out such ruling no matter who might feel aggrieved. Rochester: No reason for any change from the present market. Dubuque: Our market practically is unrestricted. Three-quarters of a century of training of producers, sellers and buyers have made it self-regulating, almost automatic in its machinery.

39. What proportion of the produce sold in the market is raised within 25 miles of the market place?

Baltimore: Perhaps all, except choice and early fruits and vegetables shipped to the city in refrigerator cars from California and the South. Cincinnati: Except meats, perishable stuffs as oranges, etc., all of it is raised within 25 miles of Cincinnati. New Orleans: All of it, if you include cows slaughtered in the city. San Antonio: Almost the entire amount. Seattle: All excepting peaches, some of the apples and potatoes. Norfolk: About 50 per cent. Boston: The larger part of the produce brought daily by farmers comes within a radius of 30 miles; but large quantities are received by railroads and boats from the South, West and foreign countries. It is claimed that 95 per

cent of the dressed meat coming to Boston comes from the West. Montreal: Cabbages, turnips and carrots, about 45 per cent; poultry, potatoes, etc., about 33 per cent. Rochester: Nine-tenths. Columbus: About three-quarters of the produce, vegetables and poultry. Dubuque: probably 95 per cent.

40. *If you were establishing a market in your city what are some of the most important features you would avoid?*

Baltimore: The present antiquated structures; the present system of revenue. New Orleans: Dirt and flies. San Antonio: Mid-day closing. Market should be open from 5 p.m. until 7.30 p.m. High rents avoid having anything sold in market except meats, fish, oysters, products of the farm, gardens and dairy. Seattle: The sale of anything except that which is grown by the man selling. This cuts out second hand dealers and commission men and keeps the matter substantially in the hands of farmer and truck men. Norfolk: Avoid anything which would in any way interfere with its free use by all citizens desiring to do so. It should be within easy reach of the residence section; should be kept in a cleanly and sanitary condition as not to be objectionable to any one. Montreal: See 33. Columbus: Varying conditions in every locality. Dubuque: Too much regulation, except as to sanitary matters and safeguarding against dishonesty.

41. *What is the attitude towards the market of the truck-raiser and farmer in the territory adjacent to your city? Does he take advantage of the opportunity to sell direct to the consumer?*

Baltimore: Favorable attitude. Takes advantage of opportunity Cincinnati: He does. New Orleans: Yes. San Antonio: Yes. Seattle: Yes. Norfolk: Favorable, as it gives him an opportunity to compare prices obtainable here with prices he could obtain by shipping his produce to the eastern markets. Not to any considerable extent. Boston: Has the most friendly feeling; very little of his produce is sold direct to the consumer, although he may do so if he desire; he prefers to sell his load and go home for more supplies. Montreal: Yes. Rochester: Yes, all he can. Indianapolis: He can if he wishes. Many do. Columbus: As a general rule, yes. Some sell wholesale as their time is worth more on the farm than the difference in price would amount to. Dubuque: He makes a most extensive use of the market. It safeguards him against combinations of grocers, commission men and extortions of transportation companies, and always gives him an opportunity of getting some "spot" cash.

42. *Has the establishment of a public market in your city encouraged an increase in the production of vegetables and other articles of food in the adjacent territory?*

Baltimore: Our markets were established before incorporation of the city and have grown up with the city. The production of vegetables, etc., is en-

couraged by the markets. Cincinnati: Yes. New Orleans: Not to any great extent. San Antonio: Yes. Seattle: Yes, decidedly so. Norfolk: Possibly it has, but it should be borne in mind that the local market does not take 1 per cent of the truck raised in this vicinity, which is one of the greatest truck raising sections in the country. The soil will produce about 125 barrels of spinach, per acre, and the amount of produce raised is enormous. For instance, one trucker raised 20,000 barrels of potatoes in one season. Boston: There are practically the same number of farmers bringing produce to the market for several years. Montreal: Yes. Rochester: Yes. Columbus: Yes. Dubuque: It has. Not only the city is supplied but much is shipped from here.

43. *Is the number of produce growers in the territory within easy access of your market increasing or decreasing? What is the reason for the increase or decrease?*

Baltimore: Cannot answer with certainty, but do not think decreasing. Cincinnati: Slowly increasing. New Orleans: No marked increase. San Antonio: Increasing. Demand increasing. Seattle: Yes, decidedly so. Norfolk: Increasing but the local market has very little to do with this result for the reason that it takes so small a proportion of what is raised. The reason the number is increasing is the fact that those engaged in truck raising have made a great success owing to the favorable conditions of climate, soil, etc., and it is this success that has attracted others. Boston: See above. Montreal: The decrease in the mentioned territory is due to the fact that the farmers and gardeners, adjacent to the city, have sold their farms to be converted into building lots. Rochester: Increasing on account of increase of population. Columbus: Increasing for the reason that it pays to raise garden truck. Dubuque: It is increasing. The fathers and grandfathers have become rich at the business. The descendants naturally take to the profitable business, and quite a few broken-down city men, willing to labor, take to this as a last resort.

WHOLESALE TERMINAL MARKETS IN GERMANY AND THEIR EFFECT ON FOOD COSTS AND CONSERVATION

BY STADTRAT D. LEVIN,

Member of the Magistrate, Frankfurt, Germany.

Scope of the Markets

The providing of provisions for the city dweller has always been a matter of great importance in the politic economy of city life. Formerly cities were almost entirely limited to the products of the surrounding country, and when there was a bad harvest in this district, cities were in danger of a shortage of provisions. This danger does not exist any longer, since now, through the very great development of trade and the means of communication in place of production nearby, they can draw upon the world production. Variations in price are of course inevitable even today. The concentration of population in cities in the last decades has greatly increased and makes great demands upon the facilities for supplying provisions. The cities must give so much the greater attention to this question, the greater their population is. Nevertheless the care of the city officials cannot go so far as to undertake themselves the furnishing of provisions or separate branches of this work and become producers or traders. In the measures against the increase in the price of meat that were entered into in Prussia in the last few years, by the cities with the coöperation of the government, this question played an important part, and there was no lack of advocates of the policy of furnishing meat by the city governments themselves. The German "City Day," at which time delegates from the various cities meet as representatives of the various German city governments, took the position that the supplying of provisions to the people could not be the task of the cities, and that it was certainly more a matter of trade and business. This point of view seems justified since we might as well require cities to provide any other article that had risen in price, as for instance by building houses or providing clothing or coal or other similar necessities as to enter upon the business of furnishing provisions. Never-

theless without question the cities must provide and find means to secure the supply of provisions in regular ways. The welfare of city populations demands such activities as the supplying of slaughter houses, cattle yards and markets. This is the subject of my article.

Legal Regulation of Markets

Markets in Germany are subject to legal regulation under Tit. IV of the "Reichsgewerbeordnung" which provides essentially as follows:

The use of markets as well as buying and selling in them is open to everyone with equal facilities. Articles of sale at the weekly markets are:

1. Natural products in their raw state with the exception of the larger animals.

2. Manufactured articles which are products in immediate connection of agriculture, forestry, gardening, fruit-raising or fish culture, or as incidental occupations of the country people of the neighborhood or by daily wage-laborers, except intoxicating drinks.

3. Fresh provisions of all sorts.

4. Fees can be demanded only for the room required and the use of booths and tools. No difference can be made in the fees charged residents and strangers. The local police fix in agreement with the local government the market rules in accordance with local requirements and especially fix the place where articles of different sorts are each to be sold.

5. The introduction of weekly markets in Germany requires the permission of the authorities. The place and time for the weekly markets are fixed by the market ordinance. Without the permission of the proper authorities the market cannot be held in any other place than that provided in the market ordinance. This ordinance contains the provisions necessary to enforce quiet and order at the market.

Tariff for Fees and Rents

The stalls are given out daily anew or granted for a longer period, generally upon monthly notice. The cooling rooms, refrigerators and other storage rooms are as a rule granted by the month or the year. They are however as a general thing also to be had by the day. The fees and rents for stands and rooms for a considerable time are generally less than for a shorter use. Very often the tariffs for the stands are graded for other reasons, as for instance according to the position and the furnishing of the stands, according to the article sold, the time of the year and the day of the week.

Open and Closed Markets

In most cities the market is held in an open square. The market place in that case is called an "open market" as distinguished from a "closed market" in the market-hall. Generally there are no special provisions and furnishings for open markets. Often the sellers sit under large umbrellas in order to protect themselves and their ware against sun and rain. If special fittings are provided they consist of stands upon which the wares are placed and roofed booths or sheds of wood. Comparatively few cities in Germany have market-halls. In small and medium-sized cities the market is held one, two or more days a week; in the larger cities it occurs daily.

Producers and Traders

In the smaller and medium-sized cities the sellers even today still are chiefly producers from the neighborhood; but in the larger cities this is no longer so. Here generally the producers in the neighborhood of the cities cannot keep up with the growth of demand caused by the increase of population, especially as increased building deprives the local producer more and more of his land. As a general thing it does not pay the producers of the less immediate neighborhood to attend the market personally, and so arise middlemen, who buy the products in the country and offer them on the market. Out of this trade of the middlemen little by little a wholesale business has arisen, which has been extended to the entire country and foreign lands, for provisioning the larger cities has become of more and more importance, even an essential factor. Therefore there will be found at the large markets middlemen and wholesalers as well as producers.

The development of wholesale business has favored a specialization in the cultivation of products, so that entire fields, specially suited thereto, by the climate or the nature of the soil are planted with fruit; and there has also occurred a more extensive use of the cultivated land. For this reason Frankfurt a/M. and Schwetzingen are known for their asparagus, Bamberg and Gross-Gerau for their horseradish, places in the Taunus for their strawberries.

Forwarding Centers

The markets in the larger cities often provide not only for their own population, but are also forwarding centers for the cities in their

neighborhood whose markets they supply with wares. Such forwarding centers are scattered over all Germany. Here and there the markets have grown to have such an exceptional importance that on account of their position they have become chief storage and exchange places for special articles and send these articles to all parts of the interior. Hamburg is such a center for oversea articles, Munich for wares from south European lands.

Market-halls

It is clear that the open market is little suited to wholesale business. With the umbrellas, stands and booths, the peasant costumes of sellers and buyers, the open market indeed affords in good weather a picture of peculiar charm. Its shortcomings are, however, equally clear. Buyers and sellers are exposed to the weather, their articles suffer from the effects of rain, sun and frost. They must be taken away at night; the dust of the street covers them and is especially unhealthy for such of them as cannot be washed; storage room for any considerable supply is lacking. Upon such a basis a rational provision for the needs of a great city that is dependent on wholesaling cannot develop. For this market-halls are necessary, halls that in general supply the following requirements.

One of the most important requisites of a wholesale market is railroad facilities in the immediate neighborhood. The tracks whenever possible should be so situated that goods can be unloaded immediately and without elevators into the halls, and not in such a way that the tracks are a story or more above and the transfer between the rail and the hall has to be supplied through elevators. The sufficient capacity of railroad facilities is of a special importance, as otherwise the goods cannot be unloaded and brought to the market at the right time, which might cause disturbances in the supply and an unfavorable influence upon prices. If water connection is at hand it is advisable so to choose the situation, that ships can be moored in the neighborhood of the market-hall, and the goods unloaded without great expense.

Room to take care of wagons is a matter of a good deal of importance. These spaces must be large enough so that there will be no interference with the increasing traffic coming to and leaving the market, which would hinder the development of the market. It is

of service to provide special space round the hall to take care of the wagons so that the street used for general traffic may not be burdened with their presence. The best form for a larger market-hall is a long oblong as it furnishes larger spaces for taking care of the wagons and for spurtracks, and renders loading and unloading much easier. Care must therefore be taken that the whole plant and grounds, the hall, the spurtracks and the provision for wagons, may keep up with the development of the traffic. It is therefore wise from the beginning to look out for abundance of land for enlargement, as with the constant growth of cities, the acquiring of land for enlargement or the erection of a market elsewhere involves disproportionately high cost.

It is of importance that large enough cellars for cooling, refrigerating, heating and storage are at hand, without which wholesaling cannot be carried on. Here too provision must be made for future enlargement. A central position is not as necessary for a hall used by wholesalers as for a weekly market as the wholesale market is chiefly resorted to by those who buy to sell again.

In order to better utilize the land market-halls may be provided with galleries. As a general thing galleries are little liked by buyers and sellers, and are to be recommended for the most part only for retail trade.

Chief and Subsidiary Markets

In the large cities there are sometimes several market-halls or markets; as a rule, however, there is only one chief market-hall, in which the wholesale business develops exclusively or chiefly, and then district or subsidiary markets, that chiefly serve for retail selling. A strong tendency towards centralization has been noticed almost universally in these cities, as has a tendency for the market for wholesaling to grow greatly, while the district and subsidiary markets lag behind. What is the cause of this? It is the nature of markets to regulate prices by supply and demand. But supply and demand are only to be found where products flow together—that is in the chief market and not in the district and subsidiary markets that provide themselves with goods mostly from the chief market, and as a rule are nothing but retail trading places like stores in the city. From this point of view it seems wrong to separate the wholesaler and the producer, and to locate the wholesaler in the chief market-hall while the producers are provided for in a subsidiary market. Both groups

provide the supply and therefore belong together in the chief market. The mistake of separating the two groups was made not long ago in a city, where a chief market-hall was opened, and the great difficulties that arose from this did not disappear until the producers and the wholesalers were again united in the chief market-hall.

Retail Selling Outside the Market-hall

Another reason for the lagging behind of the district and subsidiary markets is that retail selling has a tendency more and more to leave the market-halls for the stores. These stores are either simple fruit and vegetable shops or grocers that carry fruit and vegetables as a side line. As a rule they supply themselves daily at the chief market-hall with fresh wares. As they buy in large quantities they know how to buy, and their selling prices are mostly not at all or not greatly higher than the retail selling prices in the market. They offer the woman of the house the advantage of being able to attend to her purchases in the immediate neighborhood of her home, so that she is not obliged to make any particular preparations, to waste much time or pay street car fare. As they buy regularly in the stores they obtain credit and are served well and in a friendly way. All these circumstances have contributed to the result, that these stores in spite of many an incidental disadvantage, such as less choice and a lack of hygiene, have greatly increased and have won importance for the distribution of provisions. Warehouses also with their great traffic have very often taken up the sale of market goods, and thus contribute to the falling behind of retail business in the market-halls. In many cities the street sale of market goods plays an important part. This consists mostly in the business of sellers who buy at cheap price the superfluity from the wholesale business, and the next morning sell it at low price from wagon and push-cart, preferably in the neighborhood of the less wealthy. In Berlin the street trade plays an important part in the sustenance of the economically weaker part of the population. In many places, however, it is forbidden since it injures retail business in the market.

All these circumstances have brought it about, that retail sales in the market-halls have constantly gone back, and that the district and subsidiary markets are losing importance.

Market Conditions in Various Cities

In the more important cities the market conditions are as follows:

In Berlin there are in the middle of the city on Alexanderplatz two market-halls (I and Ia) situated side by side with galleries and spur-tracks, which are situated at the height of the galleries. Hall I was built in 1886 and hall Ia in 1893. In hall I there is only wholesaling, in hall Ia both wholesale and retail business. In addition to the two central market-halls there were erected between 1886 and 1893, thirteen district market-halls for distribution, in which for the most part only retail sales took place. Of these thirteen district market-halls on account of insufficient rentability, and in spite of the lowering of fees and other measures for the increase of business, four halls one after the other had to be closed. On the other hand business in the central market-halls has so tremendously increased that these halls and especially the spurtrack connection are no longer sufficient to keep pace with the business. Therefore the enlargement of the wholesale market has been planned for years, but no final steps have been reached as the finding of a situation was a matter of great difficulty.

Dresden has a chief market-hall at the Wettiner station of one story with spurconnection, cooling and refrigerating rooms, also two district market-halls with galleries, one in the busy old city, on the Antonsplatz, where before the erection of the market-hall there was already a lively open market, and another in the crowded new city on the right bank of the Elbe. The wholesale market-hall at the Wettiner station was erected in 1895 for wholesale business, but after two years small trading was also allowed. Business in this hall meanwhile has so increased that in the summer months the surrounding streets and squares must also be used for this purpose. Rail connection only a few years after it was opened was found to be insufficient and was enlarged last year by the use of a nearby square that up to that time had been used as a public garden. Business in the two district market-halls has greatly decreased. The district market-hall in the new city, in spite of the lessening of fees, is now hardly half filled. The gallery is used for flowers, rabbits and other exhibitions.

Cologne-on-the-Rhine has a chief market-hall with galleries, spurtracks, cooling and refrigerating facilities in the old city; about a thousand yards distant from it a retail hall in the Severinstrasse and several open markets. The chief market-hall, opened in 1904, is

situated very near the former open market-place and is separated from the shore of the Rhine by only a row of houses. The hall is in the first place intended for wholesaling, but at the same time serves for retailing. It has both connection with the mountain-narrow-gauge-road and also with the state railroad. The district market-hall, in existence since 1886 on Severinstrasse, serves entirely for retailing, and since the erection of the chief market-hall has decidedly lost importance. Some of the open markets have a lively business, which is explained by the fact, that, with the exception of the markets in Cologne-Lindenthal, and Cologne-Nippes, they have long existed and in those quarters of the city have checked the extension of the business of the stores.

In Leipzig there exists only one market-hall in the center of the city, with galleries, cooling and refrigerating facilities, but without rail connection. The lack of a spurtrack is found to be a great disadvantage. The erection of a market-hall with spurtrack has again and again been the subject of discussion.

In Munich there was opened near the Süd-Bahnhof in the beginning of 1912 a wholesale market-hall of one story with spurtracks, cooling and refrigerating facilities. Up to that time the entire market had developed on the Viktualienmarkt, and the wholesaling in the Schrännenhallen, situated near the Viktualienmarkt, which before that time had served for the grain trade. When the new wholesale hall was first opened, but a part of the producers were accepted; the acceptance of the other producers following later on. Upon the Viktualienmarkt only retail trade remains.

Breslau has two market-halls with galleries, cooling and refrigerating facilities. Both started business in the year 1908. One is on the Ritterplatz, the other on the Friedrichstrasse. Upon the opening of these two halls, the two open markets that had existed up to that time were closed. The erection of a hall with spurtracks was for the time left out of consideration, since the goods on the weekly markets came almost entirely from the immediate neighborhood by wagon to the city, and it was considered of importance that the market-halls should be situated as much as possible in the midst of the busiest part of the city.

In Hamburg, in place of the markets on the Messberg and on the Hopfenmarkt, there was erected in the year 1912 a single and centralized market near the Deichtor immediately on the upper harbor.

Hamburg differs from the rest of the German cities to this extent, that there the market arrangements consist of a specially constructed large square, that is divided by the Deichtorstrasse into two squares. A part of these two squares is constructed with cellars, and there is also upon each of them a hall. Nevertheless the larger part of the business of the market is done under the open sky. The spurtrack lies high, so that all shipments by rail must be transferred by elevator. The casemates under the railroad that is elevated at this point are used for market purposes.

In Frankfort-on-the-Main there is found in the middle of the city on the Hasengasse one of the oldest market-halls in Germany. It was erected on the spot where the old open market-place was, and opened in 1879. It is provided with a gallery running all around it, serves for wholesale and retail business, has neither rail connection nor cooling and refrigerating facilities, and by no means is any longer sufficient for the business, that meanwhile has grown mightily. Little by little therefore three additional temporary halls and an open market-place had to be added. For years the erection of a new market-hall with rail connection, that should serve chiefly for wholesale business, has been under consideration. As in all large cities the question of situation was here one of great difficulty. After exhaustive study of the needs and the experiences of other cities, the following principles for the requirements necessary for the new hall were fixed:

Though as wholesale-hall it need not be situated in the center of the city, yet its situation must be such that it may serve both as a retail market-hall for the neighborhood in which it is erected and for the larger use. It must be sufficiently large for at least the next ten years and be capable of enlargement to such an extent that reasonable provision for the future may be provided. It must have abundant cellars for storage, cooling, refrigerating and warming rooms, all capable of enlargement. It must in addition, have convenient streets and sufficient room for access of wagons and be easily reached on all sides by the street railway. Finally there must be rail connection. It is also desirable that it should lie near the Main, in order that water transport may be of service to it.

On the basis of a thorough memorandum the higher city officials decided in 1912 on the situation in the easterly periphery of the city on the east harbor, immediately on the Main. According to the plan the building is to consist of several separate halls connected with one another by passages and so arranged that the building can be enlarged

at any time by the addition of similar halls. Beside the railroad a special hall for loading and unloading is to be erected into which to bring goods arriving by rail destined for immediate shipment away without burdening the market-hall itself with them. It is connected with the market-hall by a covered street, and can also be used for the market as well as the street itself. Over the storage house are situated the offices of the management and those of the wholesalers. The plans are nearly finished and will soon be laid before the appropriate city authorities for voting the money. The market-hall in the old town is to remain as a storage-hall.

Influence of Markets Upon the Determination of Prices

The influence of the weekly markets, especially of the wholesale markets, upon the determination of prices is many sided. It may be followed up in three directions. Firstly, it is founded upon the market itself in the centralizing of regulation of supply and demand; secondly, in the lessening of expenses; and finally in the protection of the wares against injury and in their preservation.

Facilitating Supply

The more narrowly the market is centralized, the more clearly it is arranged, the easier demand and supply can be inspected. Nothing stands more in the way of a regulated fixing of prices than the splitting up of the markets. Centralization and clear arrangement are therefore of the first importance. Of course provision must be made that the law of supply and demand be effective without hindrance. Therefore it is in the first place necessary that the market should have enough room to take in at any time new producers and traders. Opportunity must also be given lessees of stands to increase their business with increasing needs, which at the same time helps to increase supply. If the hall is too small, there arise around the market-place, as one may see in many cities, private markets that make a general view of supply more difficult and injure the market. A further consequence of lack of space is the danger of the forming of rings among the wholesalers. Through the coming in of new competition the creation of rings is made more difficult. From this point of view the natural contrast between wholesaler and producer is also of weight. Even when trade in the larger markets plays an important and in-

creasing part, nevertheless the producers even today constitute an important factor in the supply of the market and by bringing the two groups together, a ring among the traders is made much more difficult. It is therefore a wise thing to favor as far as possible the producers and also to have regard to their necessities. It must be noticed in this connection that the producers visit the market mostly only during the harvest, in all about five to six months in the year, and that it does not pay for most of them to hire stands and space for the whole year since in this way their wares are made disproportionally dear. It therefore seems wise to keep space ready for them even although from the financial point of view it will be more advantageous to rent the space for the whole year.

Of unusual importance for the regulation of supply and demand are city-selling agents, who should not be lacking in any market of importance. These produce agents are licensed by the market authorities. The conduct of their business is ruled by regulations and guarded by the market authorities. They have wares that come to them from distant, especially from foreign, producers, for whose account they sell them on the market at the best possible price. The charges that are allowed them for their efforts are fixed by the market authorities. They are obliged to give security that their principals are not injured. For their business, bureaus and storerooms are at their service. As a result of all these guarantees the city-selling agents enjoy universal confidence. They tend to regulate supply and demand in that they take care that the market at all times is sufficiently supplied and any gaps in supply filled out. In large markets several city-selling agents are always busy. Thus in the Berlin central market-hall there is a special selling agent for fruit and vegetables, a second for game and poultry, a third for fish. Selling agents do business only as wholesalers, either at private sale or at auction. Special use is made of auctions in case of goods that are in danger of quick injury. The goods secure in this way as a rule, it is true, smaller prices than at private sale, but find quicker sale for cash, so that less loss for spoiled goods occurs and the principal in spite of the cheaper prices, as a general thing, brings the same amount as in private sale. It is clear that the policy of allowing city-selling agents is not agreeable to traders and producers; still nothing remains for them but to do the best they can with the arrangement, which indeed gives them an advantage, in so far as it brings business to the market. It attracts

proprietors of hotels and so forth as well as purchasers from the neighboring cities, who to a large extent also make their other purchases in the market-hall.

The setting up of facilities for the storage of supplies, for instance refrigerating, cooling, warming and storage-cellars also tends towards the regulation of supply, especially as they furnish the possibility of a quick provision, in cases of great concourses of men, like public festivities.

Lessening of Expenses

The lessening of expenses plays an important part in the regulation of prices in the case of market goods as everywhere else. As has been above stated, in accordance with the "Gewerbeordnung," business on the market can in no case be burdened with any other charges except those for payment for the room given up, and the use of booths, tools, etc. In this provision of law there is a certain guarantee that the expenses on the market that must be met by the sellers shall be as small as possible. Of course the charges for stands in the market-halls cannot be so small as on an open market that does not require any special capital. It must be noted that the city authorities do not regard market-halls as undertakings for obtaining the greatest possible profit, but as provisions for the public welfare, and are contented that they pay their own expenses without requiring additional payments. Charges for the use of spurtracks, cooling, refrigerating and other storerooms, as a general thing, are not higher than is necessary to cover cost of the plant, its repairs, interest and repayment of the original capital. In any case the charges that must be paid in public market-halls are considerably less than rents for stores and storerooms in equally good positions in the city. An important part in the lessening of the expenses is played by the spurtracks as the transportation of the provisions is made in this way much cheaper than by their transportation between rail and market-hall by wagon. Of special importance also are the arrangements that make it possible to bring the wares in the quickest and simplest manner to the storerooms, because in that way wages are saved. From this point of view elevators must be so fitted up that an entire car with goods may be loaded upon them, so that they may leave direct from the elevator; also slides, inclined planes or spirals upon which the wares without any further effort slide down into the lower rooms are important.

Preservation of the Goods

That the protection of market goods against injury is of importance in the regulation of prices needs no explanation; since most of these goods are easily injured or spoiled. The less the waste in this way, the less that must be reckoned as part of trade costs in the selling price. The avoiding of transshipment is in itself of importance in the preservation of the goods. From this point of view also it is most expedient that the wares should come in the freight cars immediately in front of the hall, and from there be brought by wheelbarrows to the place of sale, the room where they are unpacked or the storage room. Also the construction of the hall is of importance for the preservation of the wares. A hall of iron with sheet iron roof is little suited for market plant since it does not offer enough protection from heat and cold. Three requirements are to be made in this respect of the building: good ventilation, use of material that keeps out heat and cold, heating arrangements in order to heat the hall in winter sufficiently to prevent the entrance of frost. For the flower trade it is wise to have a special department that is shut off from the remaining part of the hall and is heated independently.

Finally of a special importance for the preservation of the wares are the storage rooms: for fruit, potatoes, cabbages and so forth, cool, well-aired cellars must be provided; easily injured goods like eggs, butter, cheese, meat, fish must have cooling and refrigerating rooms. Bananas require rooms with simple arrangements for heating, in order that they may be slowly or more quickly ripened. For the different articles separate divisions in the cooling and refrigerating rooms are necessary, since the temperature for the best preservation of the goods in the cooling rooms is different for the different articles, and the goods, if stored together, easily acquire the smell one of the other. In recent times cooling and refrigerating rooms are very generally provided with ozone plants that serve for improving the air in these rooms, and for the preservation of the articles stored there.

I have described in a general way the markets in Germany. In America things are different. In the different branches of public and economic life the development causes changes in the provision of supplies from the methods in Germany. Nevertheless the above description will not be without interest for those who are living under American conditions.

THE LONG ISLAND HOME HAMPER

By H. B. FULLERTON,

Director Agricultural Development, Long Island Railroad Company,
Medford, Long Island.

Up to 1905, I along with others was a consumer belonging to the city flat-dwelling tribe. In 1906 we became producers, in charge of the Long Island Railroad's Experimental Stations, casting our lot with those of the market garden profession.

As soon as the results of our labor reached the salable stage we were confronted with and astounded by the remarkable changes in food undergone during the transmission between the producer and consumer. We gathered peas crisp, vivid in color and of wonderful sweetness; we remembered yellowed, shriveled, flavorless semblances we purchased as flat-dwellers. We gathered sugar corn that lived up to its name to the very limit. We cut lettuce, crisp and with cabbage-like heads of greenish tinted whiteness. We remembered that in the city we were unable to buy at any price corn that had the slightest hint of sweetness; and that the lettuce we obtained was flabby and tough and required foreign mixtures to make it edible. We raised strawberries, large and luscious, as sweet as those wild berries of which poets long have sung. Celery we grew, whose stringless, brittle stalk forced us to use great care in gathering this sweet-flavored appetizer. Cantaloupes and watermelon we grew, of quality so high that we no longer yearned for our youthful days. Mealy potatoes, stringless snap beans and great limas equalling in full those which had long been but a memory.

All these longed-for-by-mankind vegetable foods, with many other varieties we shipped to the city, consigning them to concerns doing business as commission merchants, who had in person or by letter solicited consignments from us and who agreed over the firm's signature to sell our choice and fancy crops at the highest obtainable price and guaranteed to forward immediately proceeds of sales to us, deducting as their commission for transacting the business from $7\frac{1}{2}$ to 10 per cent. Astonishment and indignation were extremely close companions from the moment the first returns came in. Consternation was also in

marked evidence, for bunches of radishes extremely early, carefully selected, washed and honestly bunched beauties, barely returned us enough to pay for the labor of bunching. Big, firm and uniform heads of lettuce did not return the original cost of the package in which they were shipped. Carefully picked, painstakingly selected, firm and perfectly formed tomatoes brought less than the cost of the shipping crate. Occasionally we received notice that the "market was overstocked" or because of "no demand" no returns could be made, and less frequently came the astounding request that we make a remittance of various amounts "to cover the loss sustained" by the commission merchants.

Then in conference we hearkened back to the flat-dwelling days when we had bought but sparingly of some items and gone without others because of the extremely high prices demanded, and many of these items were the identical food plants for which we had received little or nothing, or a little less than nothing at times. It was a riddle, but like all riddles capable of solution; it was most emphatically "a condition, not a theory that confronted us," and having learned in our early days that the way to find out was to find out, we made an unannounced self-appointed committee tour of investigation, and in short order discovered in this our very first year as producers, the ever memorable 1906, many weird and startling things connected with the food supply of the city consumers.

We found that the phrase "market price" was a joke or hollow mockery; that it depended not one whit on that only true regulator of price, supply and demand, but rested entirely on the vagaries, the needs or the greed of a very few in whom the speculative tendency was predominant; that concerns soliciting consignments from producers and offering to make covenant with them for the very best prices, and charge for thus acting as agents varying commissions running from 5 to 10 per cent; that a very common method of procedure was to turn the producer's goods over to one or more purely fictitious firms, sometimes consisting of wives or children of the alleged commission merchants. This apparently sufficed to satisfy all mental, moral and legal principles, and of course left an unobstructed right-of-way for speculation of the most productive kind.

To the simple-minded non-gambler this seemed to be synonymous with that unsavory practice sometimes pursued by financiers designated as "wash sales." We found that beyond this there stood from

five to seven intermediaries between producers and consumers, who without one dollar of invested capital, having no expenses for rental or clerical assistance, their offices being their hats and their stock-in-trade a lead pencil, were amassing "unearned increment" that yielded them handsome city residences, attractive summer homes, and such luxuries as automobiles and even yachts.

We found out many other things. We found that our crops for which inadequate returns were being made were offered for sale in many cases at a cost so high that only the extremely well-to-do could afford to purchase them. To that great majority, the so-called middle class they must be only occasional luxuries. While to the poor who suffer for their lack, they were the unattainable.

Having solved the problem which since that ever to be remembered year 1906 has been discussed, debated, investigated and conventionized by great minds noted for nation-craft, state-craft and city-craft we returned to our modest market garden home having all fundamentals necessary to solve the riddle, whose only solution was the one word—speculation. Then knowing through personal knowledge and through reading that no law could be enacted to make man honest we naturally concluded that we must eliminate the opportunity for unfair dealing and needless additions to the cost of food, which meant "farm to family fresh."

Here we had the "word," and in a simple crate containing six regulation four-quart boxes of food plant products we delivered the "message." Its name, the "Long Island Home Hamper," followed as a natural sequence; "Long Island," for here the food was raised and the idea evolved; "Home," because it would help to solve the living problem; "Hamper," well, because alliterative phrases roll glibly from the tongue, while leaving their impress on the memory.

The fair price that was set on the home hamper was solved by the square deal method of investigating the selling price in vogue at those little stores whose owners were satisfied to do business on a margin that would cover their needs and leave them an annual surplus for a rainy day and the lessening earning capacity of accumulating years.

The first price set, \$1.50 per hamper, (we paying the delivery charge) has not been changed. To get at the net returns to us for our produce from this price must be deducted the charge made by the Long Island Railroad Company, express service, for hauling a package

weighing from 30 to 35 pounds a distance of 60 miles, and then making wagon delivery throughout New York City or Brooklyn; also there must be deducted the price of the simple regulation crate, six 4-quart boxes, separator and cover, varying between 18 and 19 cents; the cost of the paraffin paper, with which each 4-quart box is lined, and which covers the food and protects it from dust while keeping it fresh and crisp; the cost of the labels, the labor of packing and hauling to the station, two miles away, and the clamps which bind the cover to the "home hamper," nails not being used as clamps are more easily handled by those in charge of the household's most important realm. These "home hampers," shipped about seven o'clock in the morning, are delivered by noon, frequently before, and in ample time for that most important city meal, supper, called by city folks dinner.

The business was started by sending a few home hampers to acquaintances and accompanying it with a letter, in which we frankly said we had evolved the home hamper for the purpose of cutting out food speculation; for the purpose of delivering absolutely fresh vegetables, berries, etc., to the consumer and for the further purpose of securing for the producer a fair and just return for his labor and investment in his farm, his implements, his horses, his seed, his fertility upkeepers and his expenses incidental to picking, packing and marketing his crop. We asked them to investigate and if they felt the home hamper was worth \$1.50 we would be pleased to receive remittance. If on the contrary the home hamper for any reason whatever did not appeal, to accept it with our compliments.

This first shipment proved that we had filled a long-felt want; remittance was promptly received from each recipient, and further we at once received orders from others, averaging three and a third customers from each hamper shipped. We have received many letters running all the way from commendation to fulsome flattery and are advised that we save for the consumer from 70 cents to \$3 per home hamper.

In order to get an absolute check on our findings regarding the superlative array of intermediaries and their super-superlative additions of "unearned increment" we have many times make bulk shipments of items entering into the make-up of the home hamper of specific dates. We were positively stunned to discover that in the wholesale shipments we would net from 6 to 8 cents for the crops, for which when

shipped in the home hamper, we received 98 cents net; so while saving the consumer many hundred per cent, we gain for the producer a difference between 6 cents and 98 cents.

That identically the same objects can be accomplished in other ways is most apparent. Public markets in reality and as well in name have done it and are doing it in many sections of the country. In these markets it is imperative that no one be permitted to obtain a foothold or a stall unless he be producer or the duly authorized local agent of a community of producers. The only true coöperation of producer and consumer is best illustrated by the army and navy stores of England in which producer and consumer alone receive dividends and whose simple constitution or governing factors have proven impregnable to all assaults.

The Long Island Home Hamper has had no strings attached to it and has been adopted in many sections of the United States, the occasional letters received by us demonstrating that it works out satisfactorily in any climate and under any conditions of humankind.

THE COMBINATION FAMILY BASKET

A COMMUTER'S PLAN FOR DIRECT MARKETING

BY HARRY SPRACKLAND,

Barrington, N. J.

Working in the city and living on a one-acre farm in the country where I have "the time of my life" raising vegetables, chickens and small fruits with which I abundantly supply my family of eight, I have in a measure solved the problem of the high cost of living. Incidentally I have created an outlook for my children that more than discounts the artificialities of city life.

I found that, like the average farmer, I was growing more vegetables than I could use, and that the surplus was being wasted. I decided to try to sell some. The grocer from the nearby town agreed to take some lettuce and romain salad at 36 cents per dozen and some radishes at 30 cents per dozen bunches. I observed that the lettuce and romain salad retailed at from 8 cents to 12 cents per head and the radishes at 5 cents per bunch. I felt that I wanted more of that profit. However, I had neither the time nor facilities to retail what I had; yet the desire to collect some of that profit almost consumed me, for I was intensely interested in farming and had planned to go into it as soon as I could.

One morning in August I gathered from my garden a quarter of a peck of string beans, two heads of cabbage, two bunches of beets, one cauliflower, two fardhock squash (or English vegetable marrow, as it is called), one bunch of Swiss chard, a vegetable whose green tops are destined to take the place of spinach and whose large white stalks may be cooked the same as asparagus, and a quarter of a peck of tomatoes; also a bunch of potherbs containing twenty sprays of parsley, ten sprays of celery, two carrots, two leeks, two roots of oyster plant, six pieces of okra, three green peppers, some thyme and summer savory. All this I placed in a farmer's half bushel basket. It contained a vegetable for every day in the week, and a potherb that is of tremendous value to the housekeeper who knows. I delivered the basket, neatly covered, to the home of a friend in the city and explained to his wife that I would have brought twice the amount or

more were it not for the distance and weight. I asked her to look over the vegetables and tell me what she would have to pay for them at the corner grocery store as I was studying a business proposition in connection with them. Her exclamations of delight as she took one thing after another from the basket—"Just look how fresh!" "Aren't they perfectly lovely!" "I could never buy anything like these in the city." "They are so fresh looking and so bright and clean"—were all glorious music in my ears, and I felt that I had "struck oil." After taking stock, like the keen housekeeper I knew her to be, she declared that, were it possible for her to buy such things, the cost would be from 85 cents to \$1 a basket. I asked for her candid opinion as to whether the people in such a neighborhood as hers would purchase weekly, from the farmer's wagon, baskets like this one at 60 cents each. She expressed her willingness to take one every week and felt sure I would have no trouble in selling all I could grow. Needless to say, I felt elated.

I delivered many of these baskets in the city and found that the housekeepers readily recognized the benefit they derived from purchasing in this way. Just at this time I saw, through the agency of the parcel post, the possibility of a business direct from the farm; for the delivery was solved if I could put up a basket to meet the weight requirements. With this in view, I placed in a peach box or carrier, one quarter of a peck of tomatoes, one quarter of a peck of lima beans, fresh hulled, and the "potherb" I have described above. I felt that a small family would appreciate that at 25 cents at the nearby town, and, with a little explanation of the virtues of the freshness of the vegetables and the multitude of uses for which the "potherb" would be available, such as a pot roast, a soup or a stew, besides garnishing for salad, etc., I had little trouble in selling the same on my way to the city. I made up many of these baskets and they found a ready sale.

Strange, yet true, right here in the country where these things grow, they are hauled to the city, and then hauled back again by the grocers and sold to the neighbors of the farmers who grew them. Here is a field which to me offers limitless possibilities. In this same country place I have a friend who is somewhat interested in farm life, and, being a chef in one of the leading clubs of the city, he is a past master in the art of preparing food as a business. We have threshed out many things together besides the value of vegetables

fresh from the farm. We have put up in glasses for our own use vegetables and fruits the equal of which no money can buy in the ordinary channels of trade. The commercial spirit reached us on these things and we laid plans for their delivery to the waiting consumer.

In November last I took stock of what my wife had that summer preserved and canned for our winter use. I found: 91 half-pint glasses of strawberry jam, 48 pint glasses of red currant and raspberry jam; 60 pint glasses of gooseberry jam, 100 pint glasses of grape jelly; 80 half-pint glasses of grape jelly; 80 pint glasses of grape jam; 50 quart jars of Keiffer pears; 4 quarts of wild cherry syrup; 70 quart jars of string beans; 60 quart jars of tomatoes; 30 quart jars of tomatoes and corn, 20 quart jars of tomatoes and okra, 50 quart jars of gumbo creole, 10 quart jars of pickled beets, 20 quart jars of green pickled tomatoes, 24 quart jars of tomato chutney, 5 gallons of sour crout, 5 gallons of red pickled cabbage. Some of the garden stuff of the summer of 1912 is as follows: 1200 heads lettuce and romain salads; radishes; peas; rhubarb, 10 clumps; cabbage, 200 heads; cauliflower, 100 heads; string beans early and late; lima beans; kohlrabi; Swiss chard early and late; spinach; early potatoes; okra; parsley; leeks; celery; oyster plant; green peppers; thyme; beets; carrots; estrajon; corn; 1,000 heads curled endive salad; mint.

If all these things were charged up at current prices, they would take care of the interest on the home up to \$2,000. And that, to the man who has little but spare time to invest, spells independence for old age. Judging this by the standard of dollars and cents, it is a great success, yet that is outweighed as an asset to the family's health through our unlimited quantities of food to say nothing of the ennobling influence of such a life and teaching upon our children.

The strawberries which my wife preserved were purchased from a near-by farm at 4 cents per quart, the Keiffer pears at 15 cents per basket, the wild cherries were picked on the roadside. The other things and more were produced on less than one-half an acre, the remaining land being occupied by the house, lawns, flower beds, chicken house, runs, fruit trees, and grape vines, planted three years ago, some of which are beginning to bear. Experience has taught me that better results could be accomplished by confining the country home to one-half an acre, for intensive methods give larger returns with much less labor.

Further study of this fascinating problem of the distribution of farm products led me to take up the subject with the neighboring farmers and to each of them I suggested the possibilities of the combination family basket. Admitting the logic of my arguments as to its possibilities, I was forced to realize in each case that the change from their present methods was too much for them to attempt even as an experiment. This I attribute to their environment and lack of contact with new things. The weight of the family basket, packed as described, varies from twenty-five to thirty pounds. In studying how their weight might be reduced that more might be hauled to town, I made up a smaller basket to suit the requirements of a small family. After experimenting, I found the ideal basket to be eighteen inches long, twelve inches wide, nine inches deep, without a handle, costing \$3 to \$4 per hundred. In this basket I placed one small head of cabbage, one quart of string beans, one quart of lima beans, one quart of tomatoes, and one "potheb," containing eight different vegetables and seasoning herbs and six green peppers. This basket, lined and covered with oiled paper, wrapped with stout paper, tied with string, which serves also for a handle, weighed twelve and one-half pounds and solved the weight problem.

I believe that were this hamper idea adopted by commuting farmers and by truck gardeners, it would add profit to their pleasure and prove a stimulus to the back-to-the-land movement. The farmer would see its success and during its growth would have time to adjust his business to meet the conditions of the new kind of farm. The high cost of living would also be reduced, for through the medium of the basket, chickens, ducks, butter, eggs, jams, jellies, and in fact the whole product of the farm, could be delivered to the consumer.

PROFITS THAT FARMERS RECEIVE

BY E. H. THOMSON,

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Agriculture.

Many wrong impressions prevail in regard to the real profits in farming. The consumer in the city believes that the farmer must certainly be growing rich. His impression is due to the fact that he has to pay high prices for the things the farmer sells. He little realizes the amount of capital and labor utilized in the production of these products, neither does he consider carefully the difference between the price the farmer receives for the quart of milk or bushel of potatoes and what the consumer pays.

Within the last few years the Office of Farm Management of the Bureau of Plant Industry, United States Department of Agriculture, has made certain investigations with the view of determining the profits in farming and those factors that seem to control them. These investigations, called Farm Management Surveys, were made in representative farming areas in seven states, the results from which, with those found by the New York State College of Agriculture at Cornell, give an excellent indication of the profits farmers receive for their year's work. Each district surveyed usually comprised a group of three or four townships and included all the farms within the area selected. In this way average conditions were studied, otherwise there would be a tendency on the part of the enumerator to select certain farms and pass by others. All data were collected by trained agricultural students working under the supervision of persons acquainted with the work and who exercised the utmost care to obtain accurate results.

A large number of farmers keep some sort of accounts, but very few keep complete records whereby all data needed in the survey could be obtained. It has been the experience of those who had occasion to take a number of farm records that the farmer is able to give, and does give, a remarkably correct statement in regard to his financial business. As a rule a few important items constitute a large part of the farm receipts or expenses and these items, when not well remembered, can often be checked up by the creamery or dealers' accounts. Where

certain farmers will overestimate, others will underestimate, and the results averaged from 100 farms, or over, are approximately correct. An excellent illustration of the accuracy of results obtained in these surveys is given by Prof. W. J. Spillman in Bureau of Plant Industry Bulletin, No. 259, of the United States Department of Agriculture. He states as follows:

Among the several hundred farms included in the survey were 135 that sold milk to creameries. Each of these farmers was asked to give as accurate an estimate as possible of the amount of money he had received for this milk. After the survey was partially finished it occurred to the investigator that it would be possible to secure a check on the accuracy of these estimates by obtaining the actual figures from the creameries themselves. It was decided also to test in a similar manner the farmers' estimates of the quantity of milk each had sold to the creamery. The estimates as to quantity of milk sold were then obtained from the 79 farms visited after the decision had been reached to make this test. These farmers did not as a rule weigh their own milk and were not accustomed to dealing with weights as they were with sums of money; it was to be expected, therefore, that the estimates of quantity of milk sold would be less accurate than those of money received, and this was the case, as will be shown below. After obtaining the estimates from the farmers, the actual figures, both for weights of milk sold and for money received, were secured from the creameries that had purchased the milk.

Estimated pounds of milk sold (79 farms).....	3,518,816
Actual pounds of milk sold (79 farms).....	3,487,320
Difference.....	31,496
Estimated value of milk sold (135 farms).....	\$106,163.00
Actual value of milk sold (135 farms).....	106,155.50
Difference.....	\$7.50

It is seen that the error in the quantity of milk sold is a little less than 1 per cent of the whole. At the same time the individual estimates of pounds of milk sold were in error by amounts ranging from 40 per cent above to 36 per cent below the correct figures. In the total these errors tended to counterbalance each other, so that the sum of the estimates was quite accurate. In the estimates of money, in terms of which the farmer is accustomed to reckon, the error in the total is less than one-hundredth of 1 per cent. These instances will serve to show something of the measure of accuracy attainable in the results of the farm-management surveys.

The results given in the following tables are only for one year in each region. The seasons and variation in prices will make an immense difference in the farmer's income, particularly in certain dis-

tricts. In the areas studied, it is believed the conditions were fairly normal in all respects. Possibly the results from Iowa are 10 to 15 per cent too low, due to dry weather during the early summer affecting the corn yield. In Chester County, Pa., the incomes are possibly a little above normal, due to unusually high prices of hay and other roughage sold from the farm.

In table I is given the capital invested, receipts, expenses, farm income and labor income, of 2,090 farmers operating their own farms. By farm capital is meant the average of two inventories of land,

TABLE I.—AVERAGE CAPITAL, RECEIPTS, EXPENSES AND INCOME OF 2,090 OWNER FARMERS

State	County	Year	Number of farmers	Average capital	Total receipts	Total expenses	Farm income	Labor income
Indiana.....	{ Clinton	1910	123	17,536	1,876	689	1,187	310
	{ Tipton							
Illinois.....	{ Cass	1910	73	51,091	5,043	1,866	3,177	622
	{ Menard							
Iowa.....	{ Greene	1910	77	23,193	2,308	858	1,450	290
	{ Guthrie							
Michigan.....	Lenawee	1911	300	11,756	1,717	648	1,069	481
Pennsylvania....	Chester	1911	378	10,486	2,448	1,134	1,314	790
Oregon.....	{ Marion	1911	258	14,917	1,722	715	1,007	261
	{ Polk							
New Hampshire..	Hillsboro	1908	266	5,350	1,582	978	604	337
*New York.....	Tompkins	1907	615	5,527	1,146	447	699	423
Average for 2,090 farms			17,482	2,230	917	1,313	439

*Bulletin No. 295, Cornell University.

buildings, live stock, machinery, etc., taken at the beginning and end of the farmer's fiscal year. Normal values (not assessed values) were used in all cases. The farm receipts represent the income from the sales of all products, labor performed by the farmer off the farm, and gain from increased investment. No gain was allowed for increase in value of land unless justified by new buildings, drainage, or other permanent improvements. The farm expenses include all such items as feed, seed, repairs, live stock, labor, taxes and insurance. In case the farmer's sons worked, but were not actually paid, the value of their labor was charged the same as if they had been hired. No

charge is included in the expenses for the owner's labor, as his wages are represented in the labor income.

The difference between the farm receipts and expenses is called the farm income; this represents the combined earnings of the farmer's capital and his own labor. Assuming that the use of capital is worth 5 per cent, and deducting the interest at this rate from the farm income gives the farmer's labor income or the amount he receives for his year's work. This labor income represents the farmer's wages and profits, that is, if the farmer's labor income is \$439, and his labor is worth but \$300, his profits are \$139. In other words, it is the amount left for his own labor and for profit in the business. In addition he had the use of a house to live in, and all those products furnished by the farm towards the family living, the most important of which are milk, eggs, meat, garden vegetables and fruit. In the farm receipts, no credit is given for these items consumed by the farmer and his family.

If the farmer is free of debt, thereby having no interest to pay, he will have in addition to his labor income the interest on his investment to use for living and savings. In regions where the farm capital is large, such as Illinois and other corn belt states, the farmer will be able to live comfortably and yet have a minus labor income, the interest alone being sufficient to give him a good living. In fact many farmers live on the interest of their investment rather than on the real profits of their farms. Smaller farms and cheap land make the average farm investment much less in New York and New England. On such farms the amount (farm income) available to the farmer to pay interest on mortgages and for living expenses is less than \$700.

In table II is given the distribution of labor incomes for the farmers in six states. Out of 1,209 farmers who operated their own farms 5 per cent, or one in twenty, received over \$2,000 as a labor income. Twenty-three and six-tenths per cent failed to make a plus labor income.

Under normal conditions in the northern states we are led to believe that about one-third of the farmers make less than \$100 a year after the interest is counted on their investment. Severe weather conditions, or low prices, often result in heavy losses, and in many years only a few men receive a plus income. This condition is especially liable to occur in regions of specialized agriculture.

TABLE II.—DISTRIBUTION OF LABOR INCOMES OF 1,209 FARMS OPERATED BY OWNERS

States	Number of farmers	Number making minus labor incomes	Number making incomes between \$1 and \$400	Number making incomes over \$2000
Indiana.....	123	32	52	2
Illinois.....	73	27	16	8
Iowa.....	77	30	19	2
Michigan.....	300	54	105	8
Pennsylvania.....	378	42	84	31
Oregon.....	258	100	80	11
Total.....	1,209	285	356	62
Per cent of total		23.6	29.4	5.1

Profits that Tenants Receive

Approximately one farm in every three is rented (37 per cent in 1910, United States census), hence it is important that we know what the tenant farmer is receiving for his work. Unfortunately it is often assumed that all tenants are poor farmers and no credit is given them for the part they play in the agriculture of this country.

From a careful study of over 700 tenant farms, we are forced to conclude that the average tenant is a capable worker, utilizing both land and equipment in an efficient manner. Naturally, not owning the land, we cannot expect him to use the greatest of care in maintaining the fertility. However, it would seem that the fault lies with the farm owner in not caring to give the time and supervision necessary to establish a proper system of rental.

In table III are given the average capital, receipts, expenses and labor income, of 722 tenant farmers found in the same districts as the farmers operating their own land, whose incomes are shown in table I. Tenants working under both share and cash rental systems are included.

Inasmuch as land and buildings constitute from 75 per cent to 90 per cent of the total farm capital, the tenant's investment is necessarily small, there being very few tenants having over \$5,000 in working equipment. Hence the tenant's labor income must be large enough to give him his living, the interest on his investment being a very small item.

TABLE III.—THE AVERAGE CAPITAL, RECEIPTS, EXPENSES AND INCOME OF 722 TENANT FARMERS

State	County	Year	Number of farmers	Average capital	Total receipts	Total expenses	Farm income	Labor income
Indiana.....	Clinton	1910	83	1,758	1,335	492	843	755
Illinois.....	Tipton	1910	71	2,867	2,257	975	1,282	1,139
	Cass							
Iowa.....	Menard	1910	93	2,667	1,605	755	850	717
	Greene							
Michigan.....	Guthrie	1911	153	1,562	1,111	450	661	583
Pennsylvania....	Lenawee	1911	124	2,244	1,929	1,026	903	791
Oregon.....	Chester	1911	64	2,047	2,068	940	1,128	1,026
	Marion							
*New York.....	Polk	1907	134	1,281	814	371	443	379
	Tompkins							
Average for 722 farms				2,061	1,588	715	873	770

*Bulletin No. 295 Cornell University.

We have seen how a farm owner can make a minus labor income and still live, but the tenant must make wages or he cannot live. The average labor income of the 722 tenants is \$770, a much higher figure than one might expect. In these same studies it is found that the tenant's income is in almost direct proportion to the capital he has invested. This is most encouraging in that a tenant can rise to the position of a farm owner by using his accumulating savings to operate larger farms until he has sufficient funds with which to buy.

A tenant's labor income is influenced by the kind of lease he has. Under normal conditions, those tenants who rent on a cash basis receive better incomes than those renting on a share basis. Under this system, however, the landlord gives less supervision and expects a lower rate of income on his investment. The tenant takes more chances, and in good years has possibilities of an excellent income, while in poor years he may lose everything.

In table IV is given the distribution of the tenants' income for 588 farms in six states. It is noted that 5.6 per cent of them make over \$2,000 as a labor income. One-fourth of them, or 25 per cent, make between \$100 and \$400. Practically none is making a minus labor income.

TABLE IV.—DISTRIBUTION OF LABOR INCOMES, 588 FARMS OPERATED BY TENANTS

States	Number of farmers	Number making minus labor incomes	Number making incomes between \$1 and \$400	Number making incomes over \$2000
Indiana.....	83	0	26	3
Illinois.....	71	0	11	9
Iowa.....	93	3	28	5
Michigan.....	153	3	41	1
Pennsylvania.....	124	2	31	6
Oregon.....	64	1	10	9
Total.....	588	9	147	33
Percent of total.....		1.5	25	5.6

Profits that Landlords Receive

In table V is given the capital, receipts, expenses, and net income for the landlords of the 722 tenant farms given in table III. On the whole, the net returns on investment are low, considering the time and supervision needed. On the other hand, the rise in land values within the last 12 years has given the owners a very substantial profit in it-

TABLE V.—THE AVERAGE CAPITAL, RECEIPTS, EXPENSES AND INCOME OF THE LANDLORDS OF 723 FARMS OPERATED BY TENANTS

State	County	Year	Number of farmers	Average capital	Total receipts	Total expenses	Farm income	Per cent on investment
Indiana.....	Clinton	1910	83	18,423	1,002	351	651	3.53
	Tipton							
Illinois.....	Cass	1910	71	36,479	1,538	213	1,325	3.64
	Menard							
Iowa.....	Greene	1910	93	20,728	1,014	354	660	3.19
	Guthrie							
Michigan.....	Lenawee	1911	153	12,218	856	231	625	5.11
Pennsylvania....	Chester	1911	124	9,785	1,063	349	714	7.30
	Marion	1911	64	24,090	873	259	614	2.6
Oregon.....	Polk							
*New York.....	Tompkins	1907	135	5,242	573	138	435	8.3
Average for 723 farms.....				18,138	989	271	718	4.0

*Bulletin No. 295 Cornell University.

self. In regions where land values are stationary, we would not expect landlords to be satisfied with an average income of 4 per cent.

From a careful study of all available data, we are led to believe that the farmer is receiving only nominal wages and interest on his capital. In certain years he makes good profits, but adverse weather conditions or low prices in one year will often wipe out the returns of a period of years. Again, the agricultural districts which have been studied are much above the average of the general country so that the income of the ordinary farmer in all probability would be less than that indicated by the data given in the foregoing tables.

The only available data on this point, and which lead us to the same conclusion, are the paper by Professor W. J. Spillman on "The Farmer's Income," issued in Circular No. 132 of the Bureau of Plant Industry, of the United States Department of Agriculture.

These same farm management studies clearly demonstrate a wide difference in the efficiency of farm organization. Certain principles, such as the organization of the farm enterprises to secure the maximum use of labor and uniform good quality of business, are of the utmost importance. Untold possibilities are within the reach of the ordinary farmer through more efficient organization of his entire farm business without any increase in capital or labor. It is in this direction that the farmer can increase his profits, without raising the price of products sold.

EFFECT OF FARM CREDITS ON INCREASING AGRICULTURAL PRODUCTION AND FARM EFFICIENCY

BY HOMER C. PRICE,

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It is a noteworthy fact that agricultural production in the United States is falling far short of keeping pace with our increase in population. In the decade 1899-1909 the total production of cereals only increased 1.6 per cent while the population increased 21 per cent. The result of this condition has been the rapid falling off of our agricultural exports and the increased price of farm products. During this same decade the value of farm products advanced 80 per cent and notwithstanding the increased price of farm products the average annual value of agricultural exports during the last half of the decade was only \$964,449,000 and during the first half \$874,657,000. When compared with European farming, American agriculture is characterized by its extensiveness and low crop yields. The average crop yields of the leading European nations, except Russia, are at least double the average yields per acre of the same crops in the United States. But on the other hand the average acreage cultivated by the American farmer is much greater than that cultivated by the European farmer so that the production per farmer in American agriculture is far greater than in any of the European nations. The high production per farmer in America is due to the extensive use of labor-saving machinery, our abundance of arable land and its natural fertility. That we have reached our limit of agricultural production under methods practiced in the past is generally admitted. The public lands that are suitable to farming have all been occupied, no revolutionary labor-saving machinery is likely to be invented and future increase of agricultural production must come principally from increased farm production, through increased crop yields, better live stock and more economical and efficient methods of farm management.

Increased Farm Credit

Extensive farming is always accompanied by a low investment of capital per acre for equipment and operation. To increase agricultural production on our present area means an increased investment in the equipment and operation of our farms. Increased crop yields are obtained (1) by controlling the water supply, either by drainage or irrigation (depending upon conditions); (2) by increasing the fertility of the land by adding plant food through commercial fertilizers, stable manure or growing and plowing under suitable crops; (3) by improving the physical and chemical conditions of the soil through the application of lime; (4) by deeper and more thorough tillage of the soil; (5) by growing more productive and disease resistant varieties of crops; (6) by controlling insect and fungus enemies of the crop. All of these operations increase the cost of production. If the cost of any one of them does not show a proportional increase in the crop yield the operation is not justified. But as a matter of fact these operations under the right conditions show much more than a proportional return in the crop production. Why then are they not more generally practiced? Primarily because of lack of capital or proper credit facilities for financing the American farmer.

One of the most striking differences between the agriculture of the European countries that are most commonly compared with our own is the rural credit systems. Germany, France, Denmark, Belgium, Holland, Ireland have rural credit systems that have been organized and developed to meet the needs of their farmers. In America we have failed as yet to recognize that the credit need of agriculture is different from other industries. The turnover of capital invested in agriculture is slow. Investments made in permanent improvements such as buildings, fencings, drainage will not be returned in less than fifteen to twenty years and investments made in farm operations such as growing crops and feeding live stock will not be returned ordinarily in less than a year. Consequently short time loans such as are suitable to mercantile and other industries in which the turnover of capital invested is frequent, are not adapted to the needs of the farmer.

The rates of interest charged on farm loans are another important factor that deter American farmers from utilizing more exten-

sively our present credit facilities. Investigations show that interest rates on farm loans are materially higher than prevail on loans made to other industries on security not as safe as given by the farmer. This is due in part to the fact that farmers have not organized to borrow their credit in large sums but each farmer has negotiated his own loan as best he could and the expense of making and collecting the loan is high. The present system of making farm loans is exceedingly expensive for both lender and borrower and is comparable to our cumbersome and expensive methods in vogue for distributing and marketing farm products.

Farmers can make a comfortable living at present prices of farm products by following farm methods that have prevailed in the past and even though they are convinced that they could make more by practicing improved methods they refuse to borrow capital for this purpose under present conditions. The farmer who has surplus capital is usually a man of years who prefers to loan his money at interest rather than to invest it in his farm. He is past the time of life when he cares to make any radical change in his methods of farming or to invest in slow paying permanent improvements. No industry is harassed more severely with labor troubles than farming; and increased investment in farm operations means an increase in farm labor. The farmer past middle age with a comfortable competence says, "I know I could make more out of my farm if I would invest more in it, but I will leave it to the younger men to take up these new methods. I am too old to begin and farm labor is too scarce."

The fact that farmers are heavy depositors in the banks is often advanced as an argument that there is no need of any change in our rural credit system or any call for more credit in agriculture. The farmers who have deposits on interest are not the men who need the credit neither are they the men who are increasing agricultural production.

The men who need better credit facilities are the young men and middle aged men who have the future before them and are the determining factor in the future development of our agriculture. No kind of credit system will influence the older farmers to materially change their methods.

Kind of Credit Needed

Two distinct classes of credit are needed by farmers: First, short time loans that provide working capital for operating the farm. Such capital is spent to pay farm labor, to purchase seed, commercial fertilizers, feeding stuffs and the turnover will probably be at least once a year. Such loans are ordinarily made on personal security or mortgage on personal property of the farmer. In the corn belt and the more prosperous agricultural communities the existing banks furnish this class of credit fairly satisfactorily. But in the Southern States and the less prosperous sections of the North the crop lien system frequently prevails. Under this system the farmer is financed not by the bank but by local merchants who furnish farm supplies on credit charging the highest retail price and interest, taking for their security a mortgage on the growing crop. As soon as the crop is harvested it must be sold to pay off the debt to the merchant. As a consequence the farmer is forced to sell regardless of market conditions. Furthermore the cropping system is fixed and cannot be changed. The merchant knows what he can safely expect from a crop of cotton or a crop of tobacco but he does not know what a crop of alfalfa or a crop of clover will return or what to expect from live stock if a farmer is furnished credit to buy and feed live stock. Such a credit system results in a minimum agricultural production and a constantly decreasing farm efficiency because the constant cropping of the land in crops that are sold depletes the fertility of the farm.

H. E. Esswein of the Ohio College of Agriculture working in the rural life survey of the state in 1912 reports conditions in the white burley tobacco district as follows: "Tobacco growing is partly in the hands of tenant farmers who remain on one farm for short periods of time in many cases for only a year, or for two at the most. So numerous are tenants in some sections that well informed persons say that 90 per cent of the tobacco grown there is done by tenant farmers usually on the shares, one-half of the crop, or one-half of the proceeds of the sales goes to each party. The landlord furnishes his tenant a house, a garden or truck patch, horses or mules, and a few farm implements. Owing to the fact that tobacco is a crop from which one cannot hope to get returns for at least a year from sowing the seed, a system of advancing money to tenant

growers has sprung up. The system is as follows: After putting out his tobacco the grower will come to a storekeeper usually, and tell him that he would like to get an advance on his crops. The storekeeper finds out how much tobacco he has out, and determines what would be a safe loan on the crop. The grower then gives his note at about 8 per cent interest on the crop. The amount of the note is dealt out at the store to the grower and his family, as their needs require. The storekeeper holds the note until the crop is sold or else has it discounted at the bank for 6 per cent, thus enabling him to make 2 per cent on the deal.

"Occasionally some man will take advantage of the one who has advanced him money. After having obtained an advance, and having dealt out the greater part of it, he will leave the locality. The creditor, in order to get his money out of the transaction must hire some one to cultivate the crop for the remainder of the season and harvest it.

"The loss from bad debts usually resulting from a bad crop or low prices also is very considerable. One merchant in an Ohio river town showed the writer twenty notes ranging in amount from \$15 to \$250, totaling close on to \$2,000 against persons to whom his firm had advanced money on their tobacco crop. On some he never expected to realize a cent, and on others only after a long wait until another crop is grown, or else by legal process. He offered to sell the whole lot for fifty cents on the dollar.

"On the tenant's side the system is equally unsatisfactory. It keeps him without money of his own for the greater part of the year. His family and himself are denied the things they ought to have oftentimes when they most need them. Suddenly he comes into possession of money, or at least power to purchase. The tendency now is for him and his family to buy more things than they need. Merchants say that they have to be very watchful along this line, so apt are these people to buy unnecessary articles. People who follow this custom seldom get anything ahead. Hardly ever do they get land of their own. The value of their crop is lived up before it is grown and each succeeding year finds them just where they were before. In some cases, doubtless, they are obliged to pay higher prices for goods than if they had the cash, though as a usual thing merchants claim to sell on credit the same as for cash. A great number of growers look upon the system as quite the proper

thing, and it is a current saying in the region that a tobacco crop will not grow well unless it is mortgaged. . . . The greatest need in the tobacco section next to getting the land into the hands of those who will cultivate it, is to provide some substitute for the ruinous practice of advancing money on the growing crop, alike disastrous to the lender and to the borrower."

Under such conditions the only method of increasing agricultural production is to finance the farmer so that he may follow a rational crop rotation and keep live stock so as to maintain the fertility of his soil.

To the more far seeing the ravages of the cotton boll weevil that have threatened the cotton industry of the South and caused losses of millions of dollars to the cotton growers, are recognized as blessings in disguise because it has forced the farmer to abandon the one crop system and adopt mixed farming, to follow a crop rotation and to keep live stock.

The second class of credit needed by farmers is long time loans for the purchase of land, its permanent improvement and equipment. This class of loans is secured by farm mortgages and the annual returns from the investments are small. Theoretically the borrower should not be required to repay his loan before it can be earned from the investment. The farmer who borrows money and invests it in new farm buildings, in draining his land, or otherwise increasing his farm production, cannot hope, under normal conditions, to recover his original investment in five years. It is more likely that it will take fifteen, twenty or twenty-five years.

The average life of farm machinery is ten years though with good care this period can be greatly extended. But under no circumstances is a farmer likely to recover the original purchase price in less than five years. While the returns from investments in farming are smaller than in most other industries yet they are also more certain. But if our farms are to be developed as they should be and their production increased it is imperative that provision shall be made for farmers to secure credit on terms commensurate with the returns received from their investments.

The modern progressive farmer, although he knows that investments made in improving his farm would greatly increase its production and pay for itself in ten or fifteen years, hesitates to borrow capital when it can be secured only for three or five years, and

often less time, and at the end of that time has to be paid back or renewed with additional expense. He prefers to put in improvements as he can pay for them out of the earnings of his farm and and is robbed of the advantage of the use of credit enjoyed by other industries.

What a Rural Credit System Should Provide

Whatever means are taken for establishing an American rural credit system there are a few fundamental things that should be accomplished.

1. Loans on farm mortgages should be made for long periods (not less than fifteen years) with provision that they may be repaid in part or in whole at any time at the convenience of the borrower.

2. Provision should be made for the repayment of the loan by the amortization of the principal, paying installments on the principal with each payment of the interest. This will enable the farmer to pay off his loan from the returns of his investment and the terms should be such that the payments would not be greater than the earnings from the investment.

3. Farm mortgages should be made negotiable and a standard security that will circulate readily. This is done under the German rural credit system through the issuing of mortgage bonds by their land mortgage associations (the *landschaften*). These bonds are secured by the farm mortgages held by the associations and rank with government bonds for security and negotiability.

4. The rate of interest should be as low as the security offered and current rates will justify. It is generally admitted that there is no better security than arable farm land and that no class of borrowers are more certain to pay their obligations than farmers, in other words the risk is exceedingly small. Rendering farm mortgages readily negotiable will result in lowering the rate of interest and with a well organized rural credit system farmers should be able to borrow credit secured by first mortgages on their farms at as low a rate of interest as the largest manufacturing or transportation companies, and even as low as municipalities or states themselves. This has been the result in Germany where the present land mortgage credit system has existed since 1770.

5. Provision for short term loans to furnish working capital should be provided by any adequate rural credit system. For many

sections of the country an adaptation of the Raiffeisen system of Germany will probably furnish the best solution. This system based on the coöperation of borrowers and the joint and unlimited liability of members is suitable for those sections that are now at the mercy of the local merchant and have no credit at banks. Under such conditions nothing less than unlimited liability of members is likely to succeed. It was such conditions in Germany that caused the establishment of the system that bears his name, by Raiffeisen in 1847. In more prosperous sections where local banks fail to furnish the necessary working capital at reasonable rates of interest the Raiffeisen plan may be adopted with the modification of limited liability for members. This is being done throughout the more prosperous agricultural sections of Germany and furnishing farmers with working capital at slightly higher rates of interest than paid for their long time loans. In the province of Saxony, Germany, the average rate of interest paid by farmers for short time loans in their banks, for the past four years has been less than 5 per cent.

Increased farm production and farm efficiency are the direct result of increased investments of capital for the improvement of soil fertility, for improved live stock, for improved farm machinery and for farm labor. There are very few farmers using all the capital that could be used profitably in the operation of their farms. The rate of interest paid by farmers is not as important a consideration as the terms of the loan and the convenience with which it may be secured. There is a widespread sentiment among farmers against going in debt due to the unfavorable terms on which they have been able to borrow and the disastrous results that have often followed. This opposition to borrowing credit is reflected in the popular grange song, entitled "Don't Mortgage the Farm."

The American farmer as yet has not learned to use credit for productive purposes as the European farmer uses it. Neither has American agriculture assumed the permanent form of the European systems. Increased rural credit facilities are fundamental in bringing about these results and the federal and state governments can do no better service for the American farmer and our national welfare than to interest themselves in establishing rural credit systems suitable to American conditions.

FARM CREDITS THROUGH FARMERS' LOAN ASSOCIATIONS

BY ISAAC ROBERTS,

Author of *Looking Forward*, Philadelphia.

As our farmers put in practice permanent and conservative and soil-building methods of agriculture, they will ask and deserve billions of dollars in long-time loans to properly carry out that work, and put agriculture in the United States where it belongs, and is to be: . . . and long-time amortizing mortgage-loan systems must be devised to give such methods of agriculture the credit facilities and rates they will require and deserve.—From an address by Mr. B. F. Harris, before the Indiana Bankers Association at Indianapolis, Ind., October 16, 1912.

Among the many agencies working to bring about improved social conditions, probably none has greater promise of good results than the present movement to make it possible for the American farmer to obtain financial accommodation at moderate rates of interest, as readily and with as little question as the successful manufacturer and merchant can now secure the accommodation they frequently require. It is to the credit of our people, and especially of that class from whom such accommodation is usually sought—the bankers—that they have for some time past been giving more and more attention to this problem. Many have been studying it here at home. Commissions have gone abroad to study foreign methods of extending such credit, and no doubt plans for doing so here will shortly be presented as the subject of legislation, both by the several states as well as by the national legislature.

It may be well to glance at the pressing needs of the American farmer, before discussing the method of meeting them. Listed in the order of their relative importance these may be stated as follows: the farmer has need of credit (cash) for: (1) the maintenance and improvement of the fertility of the soil; (2) making and maintaining good roads, in order to make markets available; (3) improved machinery and farm equipment including auto-wagons; (4) improving farm buildings, with first attention to the home; (5) providing better schools, courses of lectures, with first attention to scientific farming, and for general social uplift.

To many minds it may occur the the last-mentioned need should be in the first place, as the needs of the boys and girls are paramount and education should claim the first attention. But if the farm itself is to remain as a producer, providing the living for the boys and girls, the fertility of the soil must be maintained. Its maintenance and improvement thus become a problem of the greatest importance even for the sake of the boys and girls themselves.

As illustrating the second need, that of good roads, so as to make markets available, the fact may be referred to that farm produce has been allowed to waste in the fields, almost within sight of some of our large cities, because the charge for transportation was so high as to wipe out all the farmer's return for shipping it. Within the past year the writer has seen, within twenty miles of one of our largest cities, a field containing five or six acres in which a thousand fine ripe melons were lying, dead ripe and beginning to rot; and the owner said that he would allow them to lie there, as they would not pay the cost of transportation to the city near at hand. Other instances of the same kind will doubtless occur to the reader.

Surely something can be done, and should be done, to remedy such conditions. It is not complimentary to our intelligence that in our cities such need for food should exist, and that on our farms a few miles away good food should be going to waste. What more damaging charge of inefficiency and incompetence can be brought against us as a people than such facts show? If we are not able to solve so easy an economic problem as getting wasting food to the hungry mouths so near at hand, it would seem as though a vast deal of gray matter had been generously but unwisely given to many.

The agency that has contributed most to the superior farming conditions in Europe is the extension of credit to the farmers at the times when they most need such help. One of the methods most frequently referred to is that adopted in France, and known as the method of the *Crédit Foncier*. This is defined as follows:

The French name for a method of borrowing money on the security of landed property which is widely practiced in France and other continental countries. The borrower takes a loan, for which he contracts to make certain annual payments, which are so adjusted as to make provision for the interest and the gradual extinction of the principal, which is fully paid when the term of the contract has been concluded. The contracts are generally made with companies organized for the purpose of loaning their capital in this manner. —*New International Encyclopedia*, edition of 1905.

The American Building and Loan Association System

From the above definition of the work of the *Crédit Foncier*, those who are familiar with the working methods of our own building and loan associations will see how close its methods of work are to those of these associations, which have been so successful and have done so much to help build up our towns and cities, and conserve the savings of the people at slight cost and on a purely coöperative basis, with whose operations so many of our people are familiar. It seems to the writer that by a few slight changes, making them more applicable to the needs of our farmers, these well-known methods might well be adopted by our people as the practical solution of the problem of farm credits.

To those who happen to be unacquainted with the plan adopted by the building and loan association it will be sufficient to say that it contemplates the accumulation of a capital (to be lent at the legal rates of interest to those members of the association desiring to borrow it) by the regular monthly payment of certain fixed monthly dues by all the members. To these monthly dues are added the monthly payments for interest, and fines levied for neglect to make payments when due. The usual dues are one dollar per month per share. The usual maturity value of the stock is \$200 per share, so that the interest per month for each share borrowed on would be one dollar. When the interest is at the rate of 6 per cent, the stock will generally reach its maturity value in about twelve years. The amount paid in at the monthly meetings is usually put up at auction, and the member bidding the most for his loan is awarded the amount desired, subject to the approval of the security offered by a committee appointed for that purpose.

By applying this general plan to the needs of the American farmer we gain the advantage of using a method that is well-known to very many of our people and that is readily understood. Because of this, and because it has demonstrated its usefulness to our people it seems to be an available method, ready for use, and requiring only slight changes to make it fully applicable to the further needs of our farmers.

Adjustable Difficulties of the Building Association Method

The chief difficulty in adjusting the usual method of work of the building and loan association arises from the fact that this contemplates the regular monthly payment of dues, and for the average farmer this would be difficult, if not impossible. As a general rule the returns from farming come in or near harvest time; say, in the three fall months of the year; while his need for ready money is concentrated about seed time and in the midst of the harvest, thus distributing his need for money more or less over the other nine months.

It would seem that this difficulty could be readily met by having at least three kinds of stock in the farmers' loan associations, as these organizations might be called, although farmers' building and loan associations would also make a good title. The stock could consist of full-paid stock, upon which interest at not over the legal rate might be allowed; regular stock, to be paid for in the usual way by monthly instalments; and term stock, to be paid for at certain periods, as agreed upon when the stock is at first subscribed for, and the loans made upon this class of stock to be repaid, with interest, also at certain fixed periods.

By arranging for these three kinds of stock, several objects would be attained: In the first place, those subscribing for the full-paid stock would be furnishing at once a considerable capital, which could be lent out on approved real estate security to those who wished to borrow on the other two kinds of stock; and again, the great difficulty in the way of the farmer making regular monthly payments on account of his stock, and in repayment of his loan is removed. It would be an easy matter to so adjust the interest to the terms of payment as to work no injustice to any other interest in the stock. By allowing for the full-paid stock in the manner suggested, it would also be possible for banks and trust companies to take a moderate holding in such associations, provided the national bank act could be so amended as to permit of such a stock holding. This is suggested as being a quick means of providing capital at the beginning of such associations.

One great advantage of the building and loan association method is that the directors are usually the best-known business men of the community, thus inspiring confidence, attracting business, and bring-

ing to the active direction of the association very definite knowledge of most of the members of the association—their habits, responsibility and so forth. In the suggested farmers' associations this would no doubt be the case, and would have great value as safe-guarding the interest of all the members. It would doubtless be a good idea in these associations to have also one or two towns-people among the directors, especially if the monthly meetings should be held, for the sake of convenience in a town. And if, now and then, a bank director or two could be added to the board, additional strength would result. In most country towns it usually happens that several of the directors of the local bank are farmers, and this has always a good effect. The reverse of this would no doubt prove to be of as great value to the proposed associations.

As an illustration of the possibilities of this plan of adjustment of building and loan association methods to the present needs of our farmers, the experience may be cited of one of these latter associations located in south-eastern Pennsylvania, in a farming community, holding its monthly meetings in the school-house of a small village. Organized about three years ago, on the usual building and loan association plan, its monthly receipts now are in excess of \$1,000 each month, its loans have been made almost exclusively upon farm properties, and there is a constant demand for the available funds, so that the earnings the past two years have been in excess of six per cent per year. While the loans have heretofore been used for the purpose of erecting farm buildings, or in part-payment for properties purchased, there can be no good reason why the farmer-borrower should not use his borrowed money for any legitimate purpose, just as other borrowers do, provided that he gives approved real estate security for his loan.

A very great advantage of the building and loan association plan is that it provides a safe local place for the investment of the savings of those working on the farm. If the farmer pays his children for little services, as often happens, or if he has hired help, as is frequently inevitable, here will be a safe saving fund, into which a part of these amounts may be invested, thus increasing the fund available for the farmers of the neighborhood when they need it. "Self-help through mutual help" is, as Sir Horace Plunkett has well said in a recent article, the sure method by which financial and social well-being is to come to the American farmer, just as it has come in this way to his cousins abroad.

Possible Methods of Raising Funds

Even under existing conditions, and without any change in the present banking laws, it would still be possible for such loan associations to raise the needed funds, if certain emergencies should make this desirable. Many building and loan associations find it frequently desirable to make short time loans at banks and trust companies, so as to have funds in hand and be able to take good mortgage loans, which otherwise they would be compelled to refuse. These loans are usually made on the plain promissory note of the association, after having been duly authorized by the action of the board, which is certified to the bank making the loan. Some years ago it was the custom in certain places for such loans to be secured as collateral loans by the assignment of mortgages held by the associations, but such loans have been questioned, inasmuch as the associations do not possess a full title to the mortgages they take from their members—the members retaining the right of redemption, which is being continually exercised; so that of recent years such loans have usually been made alone on the credit of the borrowing association, and this would seem to be the better practice.

Another method by which funds could be readily raised when this course appears fully advisable in order to accommodate a worthy member and borrower, who could not be otherwise accommodated, would be for two or three of the directors who approve of the loan, to themselves subscribe for enough full-paid stock to make the loan, and then make themselves whole by using this full-paid stock as collateral at the local bank or trust company for a loan in their own names. This course would scarcely ever be pursued, except where the borrowing member was wellknown, and it was the general desire to accommodate him: but such a contingency might happen now and then, and the plan is suggested to show that present laws and banking usage make the raising of money possible, without additional legislation—although the latter might make it more easy for farm credits to be secured. As a feasible means of extending such loans, by the adaptation of methods already well known, the above plan is suggested.

ADVERTISING AS AN AID TO DIRECT SELLING

By J. CLYDE MARQUIS,

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The principal problem in the inauguration of direct selling by producer to consumer is to get the right producer into communication with the right consumer. Direct selling involves a change of habit and business methods on the part of those new to the system, and those who as customers will be most successful in this method of marketing must be sought out by the producer. Advertising offers a solution, though only a partial solution, to this problem at present.

In the simplest form of direct selling, viz., over the counter, such as is practiced in the public market where growers of vegetables and fruits or producers of other foodstuffs meet their customers personally, the problem is simple. It is merely one of general advertising to attract the attention of the buyers of the households with simple means of advertising the products in the stalls at the markets.

In this connection we have some good examples to prove the efficiency of newspaper advertising. There are a number of cities in which public market houses have proved very successful in recent years due to the publicity given their plans in the news columns of the local newspapers. Space has sometimes been purchased by the market house management or by the owners of certain stalls. Usually, however, the dealers or jobbers and not the real producers or farmers have used such methods to attract customers to their particular stalls. Farmers have not been brought to realize the efficiency of the advertisement since they have either depended upon attracting the general trade or have sold their produce to a middleman who operates a stall with a purchased stock of produce. Few farmers care to take the time or trouble to learn to be good salesmen and in almost every public market, municipal or private, the proportion of farmers, perhaps high at the outset, has quickly dwindled until they constitute but a small per cent of the total number of stall holders. This fact has been one of the principal arguments used against the widespread adoption of the municipal market idea.

If it be true that the producer is loath to become a salesman of

his own product, how then is the consumer to be enabled to buy direct from the producer and thus save the excessive cost of handling! The answer seems to lie in direct consigning or shipping direct from the farm to the kitchen of the consumer. There is nothing new about this as a method except that it has never been extensively followed. It has not been followed because our system has been to ship in relatively large lots to a point near the place of consumption and then the produce is assorted into smaller lots which are sent to retailers who deliver to the consumer the amounts desired. Direct selling involves a change in this system in that the division must be made at the farm into lots according to the demands of the individual consumers.

This change involves a greater reorganization than may at first be apparent since it eliminates the dealer, jobber and retailer and places several of their duties upon the producer. He becomes his own distributor; he must seek his own customers, learn their needs, supply them; be his own shipping agent and collector. He must be able to judge customers for credit and be able to so price his goods as to meet all changes in the local retail market to hold his customers against the strong competition of the local retail store. To do all this is considerable of a contract. The competition of the retailer as the latter is organized at present is going to be a serious handicap in the development of direct selling for some time to come. The retailer has service, considered in the sense of convenience to offer. He is handy to the consumer, he will sell in any quantity on short notice, delivery is prompt, he will extend credit and is striving to please, coming into direct contact with the consumer or at least into easy communication by the telephone he can easily make his services appear to offset the advantages of buying direct.

Advertising does not guarantee results to anyone. Along with good advertising must go good distribution, maintenance of quality and more important than all else to the average buyer, a saving in the cost of the product. If the success of direct selling depended alone upon the improvement of the facilities of transportation then we would have seen a great growth in the use of the parcel post as a means of shipping foodstuffs. Such a growth has not occurred for the simple reason that low cost of shipping in small lots alone is not a solution to the problems of direct selling. Even with the aid of advertising there have been no rapid developments of such trade.

The functions of advertising can be shown best by brief studies of the trade in each of a number of special products. Eggs are most commonly mentioned as the food product which should be sold direct. The egg is sold exactly in the form in which it is produced. No preparation for market is needed; it is most appreciated when very fresh from the nest; it does not require refrigeration for short hauls and is a relatively light product, with a well established market value according to age.

Customers for eggs may be found by advertising in the newspapers or through printed matter mailed direct. The campaign must be one of education rather than general selling arguments, since to buy eggs direct is as yet a new thing. Such a campaign is expensive and requires a relatively large output to justify it. Shipping small lots of eggs by parcel post or express is as yet largely experimental since few containers are efficient and none can guarantee safe delivery at all times for the simple reason that some eggs are thin-shelled and break with the slightest jar. The local grocer can quickly replace a smashed dozen but the producer cannot replace them so soon. The advertiser of eggs must educate his customers to see the wisdom of buying in sufficiently large lots to justify safe packing. He must show the advantages of two or more families combining to take a consignment so as to be able to use them promptly and avoid possible waste. The consumers must be made to realize that an egg is a very perishable product and always subject to damage in transit, hence they must be considerate in case of accidents. Through advertising the real advantages of buying direct may be impressed upon the consumer who has his own assumptions regarding what he should expect. It is as such an educational aid that advertising will be of the greatest value to the seller of eggs. But it is to be regretted that the producer must pay all the cost of this campaign and the consumer is the one who will chiefly be benefited in the end.

If the egg producer is to have a system of direct delivery the problem is greatly simplified. Then he needs concentrated advertising in a given locality which will secure him many customers near together which will justify the cost of a house-to-house delivery.

In one project of this kind in New York City the manager claims that it costs about three cents a dozen to hold his trade; he has to contend with breakage, bad debts, removals and a dozen other difficulties, each petty in itself but making an amazing total. The

cost to the customer must be increased with the frequency of delivery—another fact which must be impressed upon the consumer through advertising. The total cost of retailing in the instance cited is about eight cents a dozen.

Passing to a food product that is standard yet sold only direct in a few cases except in the small towns, let us consider butter. The farm dairy is a thing of the past. The bulk of the butter now used in cities is produced in creameries where expert buttermakers using modern machinery can turn out a uniform, high grade product at less cost per pound than the small dairy. Here the delivery problem becomes more serious than ever. Butter must be kept solid. During most of the year it cannot be handled in the ordinary temperatures of living rooms. No system of shipping butter successfully in small lots by parcel post has yet been devised. It must be delivered promptly and cold. In this regard it is similar to eggs and its sale direct involves a system of delivery. But with butter, as with eggs, a campaign of advertising to show the advantages of several families coöperating in the purchase of a quantity which may be shipped in well protected cases or tubs offers promise of success. We have purposely considered eggs and butter first because they illustrate the fundamental difficulties which advertising may be used to meet. Other perishable foodstuffs as meat, fresh vegetables and fruit offer similar problems.

Where the producer has a variety of products, either fruits or vegetables, such as are needed for current consumption by the average family, the hamper system gives promise to become quite generally successful. Here the direct appeal for customers for a hamper, once, twice or oftener a week, will bring prompt and profitable returns. A postal order can be mailed for each hamper desired and the value of the consignment will easily justify the cost. There are a number of very successful examples of trade of this sort that are prospering. In one instance the newspaper advertisement contained a list with quantities specified of the vegetables contained in a two dollar hamper. These were shipped upon receipt of a mail order either for cash in advance or C.O.D. The grower in this instance reports but few losses and general satisfaction with the system. Enough regular customers were soon secured to render further advertising unnecessary.

There are certain staples which have been regarded as having so little margin of profit that direct selling has seldom been attempted

outside of the public markets, viz., apples, potatoes, onions, etc. Strangely enough, it has been with these products that some of the most interesting recent experiments have been made.

The advent of the apple box and its rapid growth in favor as a package for this fruit led some growers to try advertising as a means of securing customers for small shipments sent direct from orchard to kitchen. Only a season or two ago there appeared the first advertisement of boxed apples in a weekly magazine of general circulation. It called attention to the quality of the product and offered quantities suited to the average family at moderate prices, also definitely stated. The result was an immediate response and the sale of a large crop in small lots shipped direct to the consumer. The collections, C.O.D., were satisfactory and many customers were assured for succeeding crops. In this case the buyers accepted the offer upon face value depending wholly upon the integrity of the advertiser.

In another case the apple grower began by offering, through an advertising booklet, to ship a bushel hamper of apples to anyone upon receipt of \$1.50 with the guarantee to return the money to anyone not satisfied with the fruit. The second season of the experiment this grower offered to send a bushel hamper fully prepaid upon receipt of an order. If, upon examination they proved to be satisfactory the party receiving them was to send \$1.50; otherwise to return the shipment at the grower's expense. This plan brought orders for more than the crop to be sold and with the remarkable result that not a dollar was lost due to the failure of the consumer to pay. Certainly a striking testimonial to the square-deal sense of the average householder!

An attempt to sell onions direct to the consumer by a Texas producers' organization resulted in a very unsatisfactory season. While the advertising in general magazines was effective in bringing inquiries it was found that the prices which could be got for this staple did not justify the additional cost of shipping in small lots.

A firm in the Northwest has tried selling selected potatoes packed in boxes direct to high class trade with only partial success. The general consumer is not yet sufficiently appreciative of the difference in quality between ordinary market stock and selected varieties suitable for baking, salads or other special purposes.

There is opportunity for the development of a trade in family consignments or quantities sufficient for a winter's supply—apples by the barrel, potatoes in lots of five, ten and twenty bushels. Many

producers are developing trade of this character in small towns. A producer with a large crop would unquestionably be able to use the newspapers to advantage in discovering new customers. This trade must be localized and is not susceptible to national advertising as is the case with manufactured products for the simple reason that the supply cannot be increased to meet an increased demand until another season comes around. In the meantime the disappointed customers have gone elsewhere for their supplies.

This argument is supported by but few concrete experiences for the simple reason that advertising has not been given a fair test as an aid to direct selling. Most of the cases cited were merely experiments. I know of no enterprise planned and promoted with a serious consideration of advertising as an asset. But there can be no doubt that as a means of bringing the right consumer into touch with the right producer advertising will play a much more important rôle in the future than it has in the past.

The use of advertising as a means of promoting direct selling involves several fundamental changes in the common practices of the trade. Others will also undoubtedly be added, but these are now most frequently cited by those studying the question:

1. Buying in larger quantities; the consignments must be increased in size to gain the economy in shipping and in distribution.
2. Recognized standards of quality; these are essential as a basis for price quotations and as a means of reducing misunderstandings between the producer and consumer.
3. Improved systems of C.O.D. collections and credit accounting. Producers dislike credit accounts and most consumers are as yet unused to paying cash. Some system of credits is needed to meet the service argument of the local retailer who offers almost unlimited credit.

GRAIN GROWERS REDUCE COST OF DISTRIBUTION

By W. M. STICKNEY,

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This article is a sketch of what the grain growers in the middle West have accomplished during the last ten years through coöperation and organization. To be a little more explicit, it is the purpose of the writer to tell how these producers have reduced the cost of distribution at least \$25,000,000 annually, and briefly to detail the struggle necessary to place them in a position to effect this saving.

Coöperation as a word or term is much abused. Demagogues have learned its power, and are using it in various ways to deceive the people for the purpose of financial gain. This practice has become so vicious that the Wisconsin legislature recently enacted a law prohibiting corporations from using the word "coöperative" in connection with their business unless that business was conducted in accordance with the coöperative incorporation law of the state.

It would be impossible, however, to describe the marvelous economic movement among the producers of the middle West if I were confined to those organizations which are strictly coöperative. Nearly all of the associations which I shall mention are stock companies incorporated under the regular incorporation laws of the states in which they are located. Two or three states only, where there are a considerable number of farmers' grain organizations, have a coöperative incorporation law. In the other states a few farmers' elevator companies are conducting their business on a coöperative basis, but are doing so through a "gentlemen's agreement" or by contract, and this is neither businesslike nor safe. It is necessary, therefore, that the great majority still use the capitalistic form of incorporation or stay out of business. Efforts were made two years ago to enact a coöperative incorporation law in Illinois, but it failed on account of the large number of old school politicians who still inhabit the legislature of this commonwealth. But the people are slowly awakening, and the time is near at hand when every state will have a coöperative law similar to the one which Wisconsin passed in 1912, or which Indiana, Washington and New York enacted a few months ago.

A farmers' coöperative elevator company is an organization of farmers usually having from 75 to 300 stockholders. It is incorporated under the laws of the state where located and generally capitalized at from \$5000 to \$25,000. The shares of stock are placed at either \$25, \$50 or \$100, and there is usually an agreement limiting the number which one person may own. It is organized for the purpose of handling grain and other commodities such as coal, lumber and building material. An elevator is either bought or built and a manager is placed in charge. One of these companies not long ago used the following language in setting forth the purposes of its organization, language that in a measure applies to all: "To buy and sell on the basis of truth, justice and economy—to transact any and all lawful business for the mutual benefit of its members and patrons—to extend equal opportunity to every man and woman within trading distance, and to gradually create conditions more favorable to the every day practice of the Golden Rule."

When or where the first farmers' grain elevator company was organized I cannot say. Whether it failed or succeeded is of little consequence. In 1902 there were not over 25 such companies in Illinois. The grain trade of the state at that time was largely dominated by a combination of country grain buyers called the Illinois Grain Dealers' Association. This organization, together with those of like nature in other states, was then powerful enough to dictate in a way to quite a percentage of the grain commission merchants at such terminal centers as St. Louis, Peoria, Chicago and Milwaukee.

In the fall of 1902 some one connected with the Illinois Grain Dealers' Association conceived the idea of putting the 25 Illinois farmer grain companies out of business. Many of the grain receivers at the terminal centers mentioned were induced by certain persuasive methods to refuse to handle the business of farmer grain companies, and many of these coöperative organizations suddenly found themselves without a market for their grain. The managers and officers of the farmer companies were soon convinced that a mighty struggle was on. They were in doubt as to how to proceed or just what to do. It was finally decided to call a meeting composed of delegates from all the farmer grain companies in Illinois to be held at Springfield, February 19, 1903. About 35 delegates, representing 20 companies, attended this conference. The Farmers' Grain Dealers Association of Illinois was organized. The launching

of the state association was a signal for quick and united action among the farmers of Illinois. The struggle was on. It was a fight of the grain growers for an open market upon one hand, and the organized country grain dealers, behind which were arrayed the larger commercial interests, upon the other. No quarter was asked or given. The time had come when it was to be determined whether this was a land of the square deal, or whether blacklisters and boycotters could close the channels of trade through methods not only vicious, but in a measure criminal.

Time and space will not permit me to go into detail. Today there are about 300 prosperous and enterprising coöperative grain companies in Illinois, and from 20 to 30 new organizations are being formed every year. Every commission merchant and grain receiver is now vigorously and prayerfully soliciting the shipments of farmer elevator companies. The markets of the world are now open, and apparently everybody is posing as "the farmer's friend."

The financial gain to the producers through these organizations has been enormous. Illinois raises on an average of 500,000,000 bushels of grain each year, and probably sells about 300,000,000 bushels. Conservative men estimate that this movement among the farmers of Illinois, commencing in 1902, has been the means of raising the price of grain at least three cents per bushel over the entire state—that is, the farmer is receiving three cents per bushel more for his grain than he would if there were no coöperative elevator companies in the state. And 3 cents per bushel on 300,000,000 bushels of grain means that \$9,000,000 are left in the pockets of the Illinois farmers that otherwise would be squandered or locked in the coffers of a few large grain concerns. These figures do not include the profits on the coal handled by the farmer companies, and it is said the retail price of this article has been reduced from 50 cents to \$1 per ton. Many of them handle lumber, and the prices of this commodity have been reduced from \$2 to \$10 per thousand. Many handle building materials, and there has been a substantial reduction in the prices of these commodities.

And this is not all the story. A permanent advance of 3 cents per bushel in grain to the farmer means that at least \$5 is added to the value of every acre of land where these conditions obtain. It means added value to every item of property of every kind in every community where there is a coöperative grain company. No one

can safely estimate and but few can comprehend the enormous benefits that have been derived from this coöperative movement among the farmers of Illinois and other grain belt states during the last ten years.

Over the river in Iowa the real struggle began in 1904. There were then less than 30 coöperative elevator companies in that state, and these were scattered from river to river. No effort had ever been made to bring them into a state association for protection and mutual benefit. Line elevator systems, through the Iowa Grain Dealers' Association, controlled the grain trade of the state. By a line elevator system I mean where one company or one corporation owns and operates a large number of country elevators, and there were several of these systems with more than 100 elevators each doing business in Iowa along the different railway lines. They set the price on every bushel of grain hauled over elevator scales, and dictated what every dealer should pay to the farmer. These line elevators handled coal, many of them lumber and building material, and therefore they had the backing of the coal trust, the lumber combine, the meat trust, the railroads and other like interests.

The Iowa Grain Dealers' Association was the "watch dog" and the champion for all these different combinations and did its duty well. Whenever a farmers' elevator company shipped a carload of grain, somehow and in some way the Iowa Grain Dealers' Association got the information and the car number. It was traced to the terminal center to which it was billed, and the commission merchant to whom it was consigned was immediately notified not to sell the grain under penalty of boycott by all the "regular" dealers of the state. The same tactics were employed if a farmers' elevator company bought a carload of coal, lumber, salt, or other commodities. It was the business of the Iowa Grain Dealers' Association at that time to terrorize every man or firm that did business with a farmers' elevator company.

But in 1904 one or two men from Illinois ventured over the river into Iowa and assisted the few coöperative companies in business at that time to form an organization called the Farmers' Grain Dealers Association of Iowa. And then the fight was on—the fight for an open market and a square deal. The struggle never ceased until the producers emerged triumphant from the conflict. Iowa today has over 300 prosperous coöperative elevator companies, and the number

is constantly increasing. The Iowa Grain Dealers' Association has passed into history, disgraced by its plundering tactics and illicit relations to the grain trust, the coal trust and other like combinations, all of which have been driven to cover by an awakened public conscience and the decisions of the courts.

The story of Iowa and Illinois is the story of Nebraska, South Dakota, Minnesota, North Dakota and Kansas. Nebraska now has something over 200 coöperative farmer elevator companies, South Dakota about 225, Minnesota 290, North Dakota 275 and Kansas about 150. All have state associations, and all are working hand in hand for a greater measure of coöperation. The purpose of these state organizations as set forth in their by-laws is

to advance the commercial interests of the coöperative organizations engaged in the handling of grain; inculcate just and equitable principles of trade; acquire, preserve and disseminate valuable business information; and to encourage frequent intercourse and consultation among their members for the promotion of their common interests.

There are also numerous farmer coöperative grain companies scattered over Indiana, Ohio, Michigan, Wisconsin, Oregon, Oklahoma and Missouri. All told there are said to be over 2400 of these organizations in the United States, with at least 275,000 stockholders. This great industrial army is growing larger every year, for the farmers have come to know that ability to combine among themselves is their only means of protection from the highly organized interests that surround them on every side.

Careful men estimate that the grain growers of the middle West are receiving a profit of at least \$50,000,000 each year, due entirely to their organizations, that is, they are receiving enough more for their grain and buying their coal, lumber and other farm supplies enough cheaper to equal this amount. Say it is but \$25,000,000 and still you have an enormous sum.

But by far a greater benefit than the monetary side has come to the people of the grain belt states. Everybody is becoming a student of coöperation. And coöperation, as we know it out here, is a topic that overshadows all other questions. To us it is the doctrine of helping one another, working together. We think this spirit is of vastly more benefit than the twenty-five or fifty millions of dollars. To be sure, the financial must go hand in hand with that larger benefit,

but somehow and in some way a very wonderful change has come about.

The scope of the great work which these state organizations have done and are still doing is best illustrated in the following extract from one of the letters sent out three years ago by the secretary of the Farmers' Grain Dealers Association of Illinois to its members. He said:

As an association we are a part of a great conflict, and have been since its organization in the morning of the twentieth century when the real struggle for reform in America began. Many of the ideas advanced and the principles advocated by this organization have already, wholly or in part, been worked into laws, either state or national. The demands of the future will be even greater than those of the past. It is for us to help solve the problems of progress or fall by the wayside as weaklings unfit for the duties of the hour.

This Association stands—

For the broader spirit of coöperation which is coming to be the basis of business development and progress;

For better general conditions in the buying and forwarding of grain;

For more scientific and economic methods of handling grain both at country stations and terminal points;

For a closer business relationship between producer and consumer, whereby distribution may be simplified and cheapened;

For a scientific agriculture based on workable theories and actual facts;

For a thorough elimination of gambling in the foodstuffs of a nation;

For a reciprocal demurrage law, either state or national, that will be just to both the carriers and the public;

For distribution of cars between shippers at a station in the same proportion when cars are scarce that they are used when plentiful;

For a system of transportation efficient and business-like, but not operated for the purpose of making multimillionaires, and which develops into a joke when there is anything to transport;

For a system of federal grain inspection under civil service rules, absolutely divorced from political machinery of any kind or sort;

For an Interstate Commerce Commission large enough, able enough and with sufficient power to be both a commerce court and a court of last resort;

For a strict enforcement of the laws as they stand, without exception and without favor;

And for the self-evident proposition that to do away with evil in the state it is first necessary to do away with the conditions that produce evil.

And last of all, this and other like associations should stand for every principle of right and progress that will make better, cleaner and saner conditions in both civic and industrial life. To accomplish even a little we must be highly organized with every loyal citizen willing to do his part as a soldier in the army of the common good.

Many of the reforms mentioned will be fought by the men who fatten on the abuses we are trying to correct. And so we urge you to go out and preach this gospel of a greater coöperation in order that all the people may know the truth and join us in that larger field of usefulness into which we are about to enter. Hard work is necessary. There is no such thing as a comfortable reform. A little sacrifice is the price of putting righteousness in the place of wrong. But it is worth the price.

The annual convention of each state Farmers' Grain Dealers Association is held during the winter months. Every farmer, every man connected with local companies, and everyone interested in the principles of coöperation is invited and urged to attend. Printed programs are arranged and distributed over the state weeks before the convention meets. The best speakers that can be secured are engaged to deliver addresses on seeds, soils, grain raising and marketing, intensive farming, and on every topic pertaining to coöperative advancement. These conventions are usually in session for two or three days, and the attendance often reaches the 2000 mark.

At the annual stockholders' meeting of these local companies a speaker is usually secured to address the farmers on coöperative marketing and the science of agriculture. If these meetings happen to be held in the winter an indoor picnic dinner is often served in the town hall by the farmers' wives. The business session of the corporation is held in the forenoon, and after dinner there is generally a program of music, recitations and addresses. During the summer and early fall hundreds of "farmer elevator picnics" are held. The programs consist of games, music, and addresses on the topics most interesting to the family on the farm.

It is these thousands of gatherings every year, together with the business experience acquired in conducting the affairs of a corporation that are making the farmer a leader in the progress of the West. In fact, so progressive has he become that he now owns his own trade paper, the *American Coöperative Journal*, which is the official organ of the farmers' movement in all the grain belt states.

The future of agriculture in America depends largely on the future of this social and economic movement. No intelligent man would think of belittling the great work of our agricultural colleges and experimental stations. They have performed a marvelous service to mankind, and yet this coöperative movement among the grain growers of the North, the fruit growers of the West, and the cot-

ton planters of the South, has done more to make agriculture a science and a profession than all other forces combined. Theodore Roosevelt recognized the importance of this work when on May 31, 1907, speaking at Lansing, Mich., on the fiftieth anniversary of the founding of the first agricultural college in the United States, he said: "A vast field is open for work by coöperative associations of farmers in dealing with the relations of the farm to transportation and to the distribution and manufacture of raw materials. It is only through such combinations that American farmers can develop to the full their social and economic power."

Here, however, is the lesson of the hour. The enormous profits received by the producers as a direct result of their coöperative efforts have not raised the prices of farm products one iota to the consumer. These farmer organizations have lowered the price of every commodity which they handle for home consumption, and they have done this by cutting the cost of distribution. The producers have so far done their part in the readjustment of economic conditions. They cannot, however, do for the consumer what he must do for himself. Coöperative organizations—fruit growers, creameries, cheese factories, potato raisers, grain growers and vegetable growers—are waiting and ready to do business direct with coöperative organizations of consumers. Therefore, Mr. Consumer, in the parlance of the street, "*It is up to you.*"

And so the tide of progress moves on and broadens in its scope. Coöperation in America is still in the kindergarten stage. The coming generation will see unfold that greater development which we now can only picture. It is our duty to prepare the soil for the harvest in the years to come, and "shame and disgrace will be ours if in our eyes the light of high resolve is dimmed, if we trail in the dust the golden hopes of men."

THE MONMOUTH COUNTY FARMERS' EXCHANGE

BY JOSEPH H. WILLITS,

Department of Industry, University of Pennsylvania.

Seven years ago some farmer-grangers of Monmouth County, New Jersey—one of the greatest potato producing counties in the United States—rose in rebellion, because, as they later figured it out, they were getting just 41 cents of every dollar the consumer paid for their potatoes. The other 59 cents went to feed and pay the captains and privates in the great army of middlemen that stretched away from the farmer's front gate to the consumer's back door. The expensive system of reaching the consumer, as then practiced in New Jersey, was as follows: The farmer delivered his potatoes to the local buyer at, say, \$1.60 per barrel. This local buyer sold them to a jobber in New York at about 10 cents a barrel in advance. This jobber sold them to a second jobber in Chicago, Cincinnati, or some other city—at an advance of 10 cents or 15 cents a barrel. This second jobber then sold them to a commission merchant in his own town, or one nearby at another advance of 10 cents or 15 cents a barrel. The commission merchant next sold them to the retail grocer at another small advance, and the retail grocer tacked on another 25 per cent to 50 per cent advance before he sold them to the consumer. When to this was added the freight of perhaps 50 cents a barrel, the consumer actually paid over \$3.50 for the same barrel of potatoes for which the farmer got \$1.60. Five sets of dealers handled them and everyone who touched them increased their cost to the consumer without any benefit to the farmer. The farmer had the 41 cents and the consumer had paid his dollar: the system had the other 59 cents.

So the farmer grangers went gunning for that 59 cents. After two years' investigation and agitation among the "doubting Thomases" of the neighborhood, these farmers decided to market their own potatoes. The Monmouth County Farmers' Exchange was chartered on March 3, 1908. The members, i.e., the stockholders, elected fifteen directors who were to choose annually all the officers and employees and be responsible for the successful running of the

exchange. The board of directors chose Mr. W. H. Ingling, formerly a local dealer and buyer, as general manager, and put the active control and responsibility of the entire exchange in his hands. The exchange then opened stations along the Pennsylvania Railroad and the Central Railroad of New Jersey. At each one of these shipping stations they selected some one—some man from the neighborhood, a farmer, a farmer's son, or even a veterinarian—as local agent to receive the potatoes that the members bring in to be sold through the exchange. This agent, whose salary is three cents per barrel handled, inspects and grades them (two grades only). Each day he reports to the central office at Freehold the amount and grade of potatoes brought in by each member, and the number of cars there are for shipment from that station. Meanwhile, the brokers whom the exchange appointed as agents in all towns of any size in the eastern half of the United States, are reporting by wire to the central office prices on potatoes in carload lots in their respective towns. In this way Mr. Ingling gets a snapshot of the market prices for potatoes all over the eastern half of the United States. It then becomes a simple matter of making the contracts in cities where the best price is offered. Mr. Ingling then orders the local agents at the shipping stations to bill the potatoes that have been loaded that day direct to firms in the purchasing cities.

In the old days, these potatoes would have had to move first to New York and the jobber there would have collected his 15 cents a barrel toll. Now the potatoes, moving direct, skip the New York jobber; and the 15 cents a barrel that he used to collect goes to the exchange. Sometimes the perfect system of agents enables the exchange to deal directly with commission merchants in various towns and thus to avoid as well the jobber of those towns and his 10 or 15 cents a barrel toll. In short, the exchange succeeds in reducing the expense of the journey from the farmer's front gate to the consumer's back door by from 15 to 30 cents a barrel, and gets part of the 59 cents it was after. The cheapness of this direct means of reaching the consumer has forced other local buyers of potatoes to adopt the exchange's method, and omit the New York jobber.

At the end of each day, the prices received for all of each grade of potatoes sold by the exchange are averaged and each farmer on the following day receives his check at the average price.

But the value of the exchange does not stop simply with saving

on the cost of marketing. In the old days, nearly all the Monmouth County potatoes were first dumped into New York City. No matter if the potatoes were later reshipped, they were first dumped into New York, and the farmer got New York prices no matter whether they were higher or lower than those of other cities. Now, instead of being subject to the price bondage of one town, Monmouth County farmers choose the best prices each day current in the United States. Before this was the case, a drop in prices was the signal for every farmer to turn the whole family into the potato field to hustle the crop into the market before the bottom went out. Result: the bottom was forced out in a hurry and the farmers received and continued to receive for some time, the prices that go with a glutted market. In this state of affairs, it was not unusual for prices to vary as much as 90 cents a barrel in a season. Now, with the exchange always sending potatoes where they are most needed, a strain on any one market is not apt to occur. If a general glut does threaten the market, the exchange farmer, at the instance of the exchange, backs his potato digger under the shed and leaves his potatoes in the ground. Other buyers follow the exchange's advice and stop buying. With the pressure off, prices quickly rise again. So effective is this steadying influence of the exchange on prices, that it is rare now for the prices received for Monmouth County potatoes to vary more than 20 cents a barrel in a season. Formerly a variation of 20 cents a day was not uncommon.

Of course, all these benefits are benefits primarily for the farmer. The Monmouth County Association scarcely affects the price the consumer pays for the potatoes at all. Why should not the saving go to the farmer? He made the saving. It is not the farmer's fault that the consumer does not stop to reason out his share in the factors that produce "the high cost of living;" does not realize the need for a coöperative association of his own. Through such a consumers' coöperative association, he could deal directly with the Monmouth County Exchange, saving the tolls which now go to the pockets of the commission merchants and the retail grocer. It is not the farmer's fault that the consumer will not open his eyes to the fact that the commission merchant and the retail grocer have been getting the largest slice, over half in fact, of the 59 cents distribution cost. The consumer is too busy blaming the farmer for the high cost of living. It is not the high cost of living from which he is suffering, but the high cost of stupid living.

As a matter of fact, the farmers of Monmouth County are today showing the consumer how a consumers' coöperative society should be run. They were tired of buying fertilizer from companies whose watered stock and expensive sales departments added just so much to the price without any extra value to the fertilizer. So the exchange, although still primarily a selling agent, has turned buyer, and now annually buys and mixes for its members over \$125,000 worth of fertilizer for its three plants—Freehold, Marlboro and Hightstown.

Although the Monmouth County potato is responsible for the existence of the Monmouth County Exchange, the business of the association does not now stop with the business of the potato and fertilizer, but includes any minor buying or selling which will be of value to the members. The exchange sells his hay, his rye, his corn, or his asparagus; it buys his paris green and his lime and it scours Maine and New York for seed potatoes free from scab and rot.

The exchange has grown until it now has 30 shipping stations scattered through an area 50 miles long and 8 miles wide along the Pennsylvania Railroad and the Central Railroad of New Jersey. Its capital stock is now over \$75,000. The 1,250 members, including half of the farmers of Monmouth County, represent the best citizens of the community. Today the farmers who are non-members are apt to be the type of man who comes to the church fair in a collarless shirt and a grouch. The members come in automobiles and are on the committee in charge. Many, even of the non-members, admit that the exchange is a good thing for the community. Membership has become such a privilege that now the exchange will sell only one share to one person. The annual business amounts to a little over \$1,000,000. A surplus of \$26,000 has been piled up in four years of business; during which time the exchange, in marketing potatoes, has charged rates varying from 5 per cent on \$1.50 when potatoes were \$1.50 a barrel or less, to 5 per cent on \$2 when they brought \$2 or over. The directors expect to let this accumulate until it will be unnecessary for the exchange to borrow during the winter on the personal note of the directors in order to carry through the fertilizer business. After that, as fast as the surplus accumulates, it will be divided among the members in proportion to the amount of business they bring to the exchange.

An institution that markets cheaply by marketing directly, that gets top prices and averts glut by distributing the produce where it is needed, that buys better fertilizer for the farmer than he can buy for himself, that has yet to be accused of dishonesty—in short, an institution whose efficiency profits the farmer rather than the consumer—such is the Monmouth County Farmers' Exchange.

THE COÖPERATIVE LAMB CLUB AS AN AGENCY FOR LOWER MARKETING COSTS

BY D. H. DOANE,

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The Marketing of Lambs is on an Unsatisfactory Basis

Raisers of spring lambs throughout the middle West or Mississippi Valley frequently complain of unsatisfactory market conditions. There are several contributing factors to this existing condition. One is the not unusual and constant fluctuations of market prices. Another is the very uneven condition of the lambs, and a third is the fact that most of the lambs raised in the region mentioned are raised by farmers who own small flocks. The constant market fluctuations make country buyers afraid to make bids to the farmers, except on large margins; the un-uniform condition of the lambs makes the buyer almost certain that he will have to suffer a heavy cut when he reaches the market; the small flock contributes to the necessity of the farmer's selling locally on account of not having a carload to ship himself, consequently, the local buyer takes advantage of this fact. A general tendency found in rural communities for a one price basis to be set on all products of the farmers also tends to make it not worth the producer's while to market a good product. That is, a premium is put on the poor grade by the buyer who establishes a uniform price throughout his territory for all lambs purchased, good and bad alike.

These conditions have been very largely responsible for the restricting of the production of more sheep on middle West farms. In an effort to overcome the wholly preventable conditions there, a number of plans have been tried. Naturally, our attention is first turned toward some coöperative means of marketing, and along this line relief has been found.

A Special Investigation of One Set of Conditions

In order to get accurate information as to the real problem of sheep raisers, a special investigation was conducted by Mr. R. S. Besse, of the University of Missouri, and the writer, the idea being

to determine the supply of marketable lambs in a given community, the conditions under which they had been previously marketed, and to see if possible if there might not be an opportunity for bettering conditions. A representative territory was chosen, and a personal visit made to the farms of sheep growers.

On the first farm visited, we found a man with a bunch of western ewes and a very excellent lot of early spring lambs. The lambs had been docked and a creep had been built, so that it was possible for the lambs to get a little extra feed, a pure bred ram had been used in siring this young flock, and the general appearance of the lambs that were ready for the market was very satisfactory. We found that this farmer had followed rather closely the instructions given by college authorities on the proper methods for producing and raising market lambs. He informed us that the local buyer had offered $5\frac{1}{2}$ cents a pound for his lambs just the day before.

We next visited farmer No. 2. We found that he had a superior grade of western ewes. He had, however, used a common grade ram, and while he had fed some extra feed through a lamb creep, still he had not docked his lambs, and they did not make nearly so good an appearance as the first flock. The second flock of lambs was older than the first. Our estimation of value would have placed these lambs fully $1\frac{1}{2}$ cents below the first flock. We found that the local buyer had offered the same price for both bunches of lambs.

On a continuation of the journey, we found conditions very similar to those described. In no case had the local buyer offered a premium for the difference in quality of the lambs, and it is really hard to describe the real difference that was found between the best and the poorest lambs on the different farms. The price offered by this local buyer was \$2 per hundredweight below the top of the St. Louis market. Conservative figuring resulted in the estimation of 75 cents per hundredweight, as the necessary charge to make for freight, commissions, etc., incident to selling the lambs. This left the local buyer with a margin of \$1.25 per hundred on the lambs he intended to purchase.

The farmers visited on this investigation trip were induced to select the best lambs from their flocks, culling them carefully as to quality, weight, and uniformity, and deliver them to the nearest shipping point on a given day and make a shipment coöperatively. Each farmer's lambs were carefully marked and weighed at the ship-

ping point, and he was given a ticket of credit for the home weight of his lambs. The cost of shipping was to be based proportionately per pound of shipment contributed by each farmer.

An interesting side-light came at this juncture when the buyer who had gone through the country making bids previously mentioned heard of our intention, called upon farmer No. 2 who was mentioned as having a rather inferior grade of lambs, and offered him 50 cents per hundredweight more for his lambs than he had offered to the others; his probable intention being to break up the coöperative arrangement, thus making it impossible for the other farmers to get together one load of lambs. However the car of lambs was shipped to the St. Louis market and graded on their merits. The most of the lot sold for \$7.50 per hundredweight, but some few were culled out and only brought \$4.50 per hundredweight. The lambs that were culled were all taken from those contributed by farmer No. 2.

It will be seen from this that the major portion of the lot of lambs brought \$2 per hundredweight more than was offered by the local buyer. Our figuring of 75 cents per hundredweight shipping charges proved ample, and it left the farmer a little over \$1.25 per hundredweight as a margin for his coöperative venture. This result was so eminently satisfactory to the farmers concerned that some permanent farm organization seemed advisable.

A Successful Lamb Club for Over Twenty Years

Upon investigation it was found that in Goodlettsville, Tennessee, there was a lamb club that had been in existence for a large number of years. The plan upon which this club was organized was, in brief, similar to the one used by the farmers mentioned. The officers of the club consisted of a president, secretary-treasurer, and three men selected as an executive committee. It was the duty of the secretary-treasurer to advertise for sealed bids for the lambs that the club was to market each year. He advertised that a certain number of definitely described grade and quality of lambs would be ready for shipment on such and such a day at such and such a shipping point. These bids were sent to him sealed, from all over the United States. The guarantee of the club that the lambs should come up to description, their general uniformity, and the large num-

ber shipped, made it possible and practical for buyers to come from all over the country. The executive committee was on duty at the shipping point on shipping day, and carefully graded each load of lambs that the farmers brought in. All inferior lambs, or lambs that were deficient in any way, were culled back and returned to the farmer who brought them with instructions to hold such a lamb over until the next shipment was ready. The successive shipments of this club made it possible for the farmer to cull out his best lambs each time, thereby always receiving the top of the market. The lambs that generally go toward the last of the season can, by proper management be made as good as those that go at the first. This was one of the successes of this club, for under ordinary conditions the buyer takes the full lamb crop at one time, paying a certain good price for a few of the best ones, and making heavy reductions for the smaller ones, the latter being every bit as good as the former, except that they are younger and generally lack size and finish. Successive shipments of the lamb club make it possible for the growers of good quality lambs to sell all that they raise for top prices.

Investigations around Goodlettsville show that farmers who own flocks of half a dozen ewes have an equal advantage with these who own ten or twenty times as many. Shipping and other charges are always made proportionate, and the existence of this lamb club has put the selling of the lambs on a firm, well established and long-standing basis. The prices received are from \$1.50 to \$2.50 per hundred-weight above what farmers not in the club receive for their lambs that are in reality as good as the Goodlettsville lambs.

The Organization of a Lamb Club

The successful experience of the Goodlettsville farmers has led to the organization of farmers in other communities. The machinery for handling the coöperative plans is extremely simple. A president, secretary-treasurer, and three temporarily elected executive officers, whose duty it is to pass on the quality of the lambs at shipping day, are all that are necessary. Each member of the club is asked to sign the following application for membership and pay the dues mentioned:

APPLICATION FOR MEMBERSHIP TO THE COUNTY LAMB CLUB

In consideration of receiving membership to the.....County Lamb Club, I faithfully agree to the following:

1. I will pay to the club for membership fee and annual dues, \$1 per year.
2. I will sell all my market lambs and all my wool that the club will accept, through this Association as long as I am a member thereof.
3. I will agree to dock all lambs and agree to castrate the males that are sold by the club.

Signed this, theday of191 .

As a working basis, the following rather abbreviated form of club policy was adopted. Its chief features are brevity and efficiency:

..... COUNTY LAMB CLUB

OFFICERS, THEIR DUTIES, AND THE GENERAL POLICIES OF THE ASSOCIATION
Organized at.....Co.,.....191

OFFICERS

The officers of this club shall be a president and a secretary-treasurer.

There shall be an executive committee composed of three men, the chairman to be the secretary of the association, the other members being members of the association chosen by a majority vote of the members.

DUTIES

The duties of the president shall be to call the meetings of the association and preside, and perform such other duties as naturally fall to the official head of such a club.

The duties of the secretary shall be to carry on the correspondence of the club, handle the accounts, advertise for bids, and generally conduct the business of the Association.

It shall be the duty of the executive committee to grade and pass upon all lambs and wool sold by the club.

The executive committee shall receive as compensation for their services, as follows:

The chairman shall receive \$..... per day for not to exceed days. The other two committeemen shall receive per day for not to exceed days.

POLICIES

It shall be the policy of the club to advertise for sealed bids for all products sold. They retain the privilege to accept or reject any bid. All products sold by the club are sold under its guarantee and to be as represented.

No lambs should be sold at a less weight than pounds per head at the shipping scales at

All wool sold should be graded in three classes:

a. Absolutely clean and free from burrs and dirt.

b. Some dirt and a few burrs.

c. Burrs.

In the handling of all flocks of sheep, the following points are strongly recommended by the club:

1. A uniform grade or kind of ewes should be kept.

2. A pure bred Down ram should be used.

3. Breeding should not be done for more than three months, preferably two.

4. If possible, ewes should be bred to drop lambs during January and February—never later than the last of March.

5. Green pastures should be provided, if possible, in the form of rye, wheat, clover, etc.

6. A lamb creep, which allows the lambs to obtain some extra grain while suckling the ewes, should always be provided.

7. Docking should be practiced.

This club should work in active coöperation with a central association. When these clubs are organized throughout the state, no small amount of help can come from the general central association in helping each to keep in touch with market conditions, supply and demand, and all phases of the business other than the local situation.

The Lamb Club Shortens the Road to Market

From the foregoing, it can be seen that the coöperative lamb club does much toward increasing the profits of the farmer in the raising and marketing of his lambs. This increase of profits naturally leads to a greater expansion of the business, which in turn should finally have its effect on decreasing the cost of product to the consumer. Of course, there are a number of steps between the purchase of the lambs by the packers at the market and the consumption of the mutton by the consumer. Our experience has not covered that phase of the situation, but it is certainly a fertile field. It is a more or less popular belief that the farmer is becoming immensely wealthy these days because of the seemingly high prices he receives for his products. When it is generally known that 50 per cent of the farmers are not receiving as much for their labor as their hired hands, this misconception will pass away, and farming will necessarily be forced to a better basis. The cost of production is a feature the farmer generally considers but little. The cost of marketing and better ways of marketing are even more foreign to him. Plans for coöperative marketing have been worked out, but not infrequently fail for various reasons. The distinctly individualist tendencies of the farmer

and his feeling of independence are not unimportant features of his inability to successfully cooperate. The lamb club undoubtedly forms a beginning step. Its extension to other classes of stock and other classes of products may or may not be applicable. It depends largely on the local conditions, market conditions, and the quantity and kind of stock, or product that is being, or can be, raised in the community. It is reported that groups of farmers in the Northwest handle their cattle on the same basis as the lamb club.

Successful cooperation from the standpoint of results must be based essentially, it would seem, not on sentiment, or loyalty to an oath or an organization. It must be based on business principles and economic conditions. The farmer must be visibly benefited, fairly treated, and must in turn be able to do the same for those who receive his products. These are but simple business principles, and when worked on their merits should, as our experience in the past has taught, bring satisfactory results.

THE CONSUMERS' COÖPERATIVE MOVEMENT IN CHICAGO

W. M. STICKNEY,

Chairman Local Board U. S. Coöperative Company, Chicago.

Much has been said and written in regard to the high cost of living. Marvelous and many are the theories advanced to cheapen table necessities. Ordinarily a topic so much discussed would have become stale long ago but this one seems ever new. Out of it all, however, will soon come some workable plan that will enable consumers to get together in a spirit of helpfulness and organize for mutual protection.

People well informed have no fight to make with the average run of middlemen. A very large percentage of them are progressive citizens and honest to the core. They have been and still are performing a great service, and but few of them are getting rich. Their multiplicity, however, is largely responsible for the high cost of living today, and in addition to this they are hampered by a clumsy, antiquated, wasteful system of distribution. It is this entire system that we are warring against, and it must eventually be stored away in the world's garret among other second-hand and discarded methods of commerce.

The following form of illustration is old, but the stage setting here is new. Woodlawn is a part of Chicago, a resident district, and yet, in a section seven blocks long and three blocks wide there are 35 retail grocery stores, meat markets and delicatessens, all told. It does not take any great stretch of the imagination to see the endless and enormous expense including clerk hire, telephones, rentals, interest on investment, delivery service, insurance and a dozen other items, all of which the consumer must pay. I live in a small apartment building in Woodlawn, and there are at least seven or eight different grocery and market wagons, belonging to as many different firms, that deliver goods at that building from one to three times daily.

This is not economy—it is burning money.

One coöperative grocery and meat market combined located anywhere in the territory mentioned could easily handle all the business

and give as perfect service to all the people as they are now getting. Such a store would necessarily be so large as to enable it to buy in carload lots almost every commodity it needed. It could easily save 10 per cent on account of its buying power and cost of delivery, and 10 per cent more in overhead expense, or a total of 20 per cent in the present cost of living in that community. Then take into consideration the profit, for all goods would be sold at a profit above cost and operating expenses, and there is no question in the mind of any sane man that 25 per cent could easily be returned to the patron if the business were conducted on the same level of prices that it is today.

We have mentioned but one store. If there were 40 or 50 of these coöperative establishments scattered over Chicago, with a coöperative wholesale store in connection, also a coöperative receiving center with a cold storage plant, all working together with the retail stores, then the profits would be even larger than indicated above.

If every family in Woodlawn would take stock to the amount of \$20 in the kind of a local coöperative store mentioned here, it would not only get 6 per cent interest on the investment, but would easily receive every year in dividends at least twice the purchase price of the stock, provided its yearly grocery bills amounted to around \$400. There is no sentiment about this. It is simply a matter of figures, a matter of economy and a matter of business. Let us suppose that these profits are exaggerated. Cut them in half and even then there is a big return on the investment, and the cost of table necessities would be reduced to as low a basis as we may ever expect to see them under the present standard of living.

There is now a coöperative store in Chicago located in Hyde Park adjacent to Woodlawn called the U. S. Coöperative Company. It has been in business about one year. It is incorporated under the coöperative incorporation laws of Wisconsin, which provide that a stockholder shall have but one vote, and limits the number of shares which one person may own to 100 at \$10 each, par value. It also provides that the directors shall apportion the earnings by first paying dividends on the paid-up capital stock not exceeding 6 per cent per annum, then setting aside not less than 10 per cent of the net profits for the reserve fund until an amount has accumulated in said reserve fund equal to 30 per cent of the paid-up capital stock, and 5 per cent thereof for an educational fund to be used in teaching coöperation, and the remainder of said net profits

by uniform dividend upon the amount of purchases of shareholders and upon the wages and salaries of employees, and one-half of such uniform dividend to non-shareholders on the amount of their purchases, which may be credited to the account of such non-shareholders on account of capital stock of the association.

The plans of the men who organized the U. S. Coöperative Company were to establish coöperative stores in the different resident sections of Chicago, or rather get the people living in those sections to do this work themselves. These stores were all to be in the same company and under one management. Five stores of this kind would constitute a fair buying power, 25 would give a greater buying power than any other retail grocery institution in the city, and 40 or more would enable the U. S. Coöperative Company to establish its own receiving center for fruits, produce, and groceries of every kind and sort. All of these commodities could then be purchased in carloads if necessary and distributed by auto trucks to the different coöperative stores.

To my mind this is the most practical method yet proposed for reducing the cost of distribution, and this is the question of the hour. It has been worked out along these lines in other countries and by people who do not claim to be half as smart nor half as rich as the people of American cities. To be sure, the population in Chicago is largely made up of "cliff dwellers" leading a nomadic life—here to-day and away tomorrow—but if we can have a good coöperative store in every community and all in the same organization, we will catch the nomads going and coming, for no matter to what community they move they will find there their coöperative store.

The coöperative store idea is a very inviting proposition when put upon paper, but it has many drawbacks. Perhaps it were better to say that human nature is the drawback rather than the problems of the store. The coöperative principle of operation is the very antithesis of cut prices and bargain sales, for these are usually a delusion and a snare, an easy way to fool the people, and there are many always waiting to be taken in. Therefore, when a coöperative store commences business, the other merchants quickly arrange a "price cutting" campaign. One will drop the price on sugar, another on onions, another on meats, and another on something else for the purpose of perplexing the economical housewife who may be by nature and education a bargain hunter. It is a matter of record that

some people will spend 10 cents carfare to save a nickel on a few quarts of beans, or 2 or 3 cents on some other commodity. It takes time to overcome this habit, but most people finally learn that standard goods, correct weights and measures, fair and reasonable prices, are the cheapest in the long run, provided these goods are purchased at a coöperative store that returns all profits to its customers on the basis of patronage.

A coöperative store is a great educator and teaches the people to work together in the spirit of mutual respect. It will take some fight and some sacrifice to make it a success, but this is always the price of putting righteousness in the place of wrong. No great good can be accomplished in any other way. The stockholders of the U. S. Coöperative Company are mostly business and professional men, and among them are many University of Chicago professors. The members of the local committee having the store in charge are called the "fighting ten." These men together with others usually spend one or two evenings each week trying to interest their neighbors in coöperation. There is also a committee of ladies which is carrying on an educational campaign by holding meetings in different sections of Hyde Park and Woodlawn. The men and women of these committees also go into other resident sections of the city to attend meetings called to discuss the coöperative idea. In one or two of these districts where meetings have been held nearly enough money has already been subscribed to operate a store.

Coöperation is rapidly gaining in Chicago. Many of the largest women's clubs in the city have placed this topic on their program for the coming year. Several of the most influential churches in different resident sections have thrown wide their doors to meetings called to discuss the problem of a coöperative store. One or two prominent pastors have devoted an entire Sunday morning sermon to this topic. A few weeks ago a young colored gentleman called at the office of the writer to get information in regard to the forming of a coöperative organization. He said the colored people wished to have a coöperative store. It was evidently no idle dream on his part, for the daily papers some ten days ago contained an account of a coöperative wholesale and retail grocery being organized in the negro business and resident district of the city with a capitalization of \$100,000. These are but few of the many straws that show the current of the stream.

And so the good work goes on. It will take time, but eventually coöperation will win out. It is winning everywhere. There will be failures now and then, but taking the coöperative proposition as a whole, the percentage of failures is smaller than in any other profession or occupation in the United States. Failure of a coöperative concern is usually heralded the country over, even by publications that never mention a successful enterprise of the kind.

Much has been said about municipal markets, direct purchasing by consumers, purchasing by hamper route, housewife leagues and other similar methods. These may all have some merit, but in a measure they are largely makeshifts. There is no use in fooling about this proposition, and the people might as well "get down to brass tacks" at once. The market basket has gone with the stage coach, the old dash churn, the grain cradle and the scythe. The average housewife in the city is not going to tramp to market and carry home groceries of every kind and sort. No well informed and reasonable person expects her to do this. There are certain sections in every city where the municipal market might prove a blessing to a large number of people, but it will hardly appeal to the great average class of city dwellers who have neither the time nor the inclination to do their marketing in person and carry home the goods themselves.

Marketing by telephone has come to stay. This might just as well be taken into consideration when casting around for some permanent and economic system for reducing the cost of distribution and thereby lowering the price of table necessities. To be permanent, the economic system that we are searching for must have all the conveniences of the present system and more, for we are living in an age of progress.

Producers everywhere are doing all they can to bridge the chasm between the consumer and themselves. On April 8, 9 and 10 of this year more than 450 delegates, representing 37 different states, met in Chicago. It was called the "First National Conference on Marketing and Farm Credits." It was an assembly of resourceful and brainy men, fruit growers, vegetable growers, grain growers, college presidents, agricultural college professors, in fact men from most every walk in life. The main object of this meeting was to devise, if possible, a more economic system of distribution, and after all the addresses and discussions the conference was unanimous as to the rem-

edy—coöperative organizations of consumers working directly with the producers, or rather with coöperative organizations of producers.

This is the trend of the economic and social spirit of the times. The farmers on the great prairies and by the wooded rivers are not alone in this onward movement, for the same feeling is found wherever men toil and think. Never before have the people in their daily living been so nearly in accord with the teachings of the golden rule, and never before have so many men and women been willing to labor in the ranks for the common good. This is the spirit of coöperation, and though it may not cure every social and commercial ill, it will "sweeten the waters of human life and pluck many a thorn from the pathway of mankind."

WHAT COÖPERATIVE SOCIETIES MAY ACCOMPLISH IN
LOWERING FOOD DISTRIBUTION COSTS

BY E. M. TOUSLEY,

Editor *Coöperation*, and Secretary Right Relationship League,
Minneapolis, Minn.

The subject in hand would imply that the cost of food distribution is too high and that it may be lowered through the organization and proper operation of coöperative societies. In the treatment of this theme one can scarcely differentiate between the high cost of production and the high cost of distribution. The cost of the one, production, affects the cost of the other, inasmuch as the middleman system of distribution is carried on on a percentage basis of profit. It may therefore be necessary to analyze both phases to some extent.

We may begin by stating two self-evident facts: The farmer wants, and should get, on the average, higher prices for his products. Second, the consumer wants, and should be able to get, on the average, his products at lower prices. Here are two classes of people whose sole aim, so far as the subject under discussion is concerned, is to attain results diametrically opposed to each other. How may both classes secure the desired results? How may the farmer increase his income to a reasonable degree and the consumer at the same time be able to decrease his living expenses?

The answer is both simple and complicated. Coöperation, and coöperation alone, will do it. Coöperation, when properly inaugurated, does two things: First, it establishes a proper system of operation in both production and distribution and teaches efficiency in business principles, thus eliminating all the wastes of a lack of system. Second, it distributes justly the values created through its economic system.

Two Grand Divisions

In order to arrive at a proper basis for applying the economic and other principles in coöperation, it is necessary to take into consideration the two grand divisions entering into the cost of living, namely, production and distribution. Production is easily divisible

into two subheads, namely, agricultural production and manufacturing.

Coöperation as applied to agricultural production and marketing, it may be said, has so far accomplished nothing in reduced prices to consumers. While there are no data whatever at hand to prove this assertion, we believe all will concede that no one has ever heard of lower retail prices to consumers by reason of the existence of coöperative societies among farmers. This is easily accounted for by the fact that the machinery of distribution is still in the hands of the so-called middlemen or those who are in the business solely for the purpose of making profits. There is no question but that in many instances the products of the farm have been greatly improved in quality by reason of coöperative organizations. We have only to point to the coöperative creameries of the middle West and to the coöperative citrus fruit societies of the Pacific coast. The improved quality of both of these products, as now offered to the consumer, is very marked indeed when compared with their quality twenty to twenty-five years ago. From the lesson thus taught, it may be assumed that when similar coöperative societies are formed for the production, grading, packing, and marketing of all farm produce, a like improvement may be made. And from this viewpoint, and the elimination of unnecessary waste in raising, preparing for market, and shipping, our great body of farmers may materially increase their income.

While such a result is desirable, we would still be confronted with the fact that the price to the consumer has increased rather than diminished. Whether or not the improved quality equalizes or more than makes up for the increase, is beside the mark. It is necessary that the agricultural producing end shall be efficiently organized into such coöperative societies, however, as a foundation for the eventual elimination of the present wastes of distribution.

As I am writing this article two dispatches in the daily papers demonstrate the enormous waste of the lack of system in farming, combined or added to which is that of the inefficient, extravagant, and improvident system of distribution, causing total dissipation of value to the farmer and increased cost to the consumer frequently to the extent of hunger. One item comes from New Haven, Conn., stating: "Nature's bounty in the flood of late peaches in orchards here is so generous that the fruit is being fed to hogs and cattle.

Many growers will let peaches waste on the trees and on the ground. The best fruit ever seen here is offered at fifty cents a bushel at the orchards."

The other dispatch comes from Mankato, Minn., and says: "For the want of a market, fruit growers of this and adjoining counties are allowing tens of thousands of bushels of the finest kind of fall and winter apples ever raised in this state to rot on the ground under the trees or are feeding them to their hogs. Prices offered do not warrant farmers taking the time and trouble to market the apples, and they can be had almost for the asking."

Such a state of affairs, if true, shows criminal neglect or lack of organization and system, when there are millions of consumers within a radius of one to two hundred miles from these orchards, and a large majority of such consumers are financially unable to buy the fruit because of its high price.

Machinery of Distribution

Thinking men everywhere are beginning seriously to consider the problem of food distribution, by reason of the trend of population to the large cities in recent years. City people are apt to think only of their own ills in relation to the high cost of living, without taking into proper consideration the causes of those ills. The problem of economic living in cities is irrevocably tied up with better farming, better rural conditions generally, and proper and efficient systems of transportation and distribution.

This question divides itself into four general heads:

First. Marketing of agricultural products at primary points.

Second. Transportation.

Third. Wholesaling.

Fourth. Retailing.

These four general heads make up the entire machinery of distribution. If betterments are to be made and the cost of living of city consumers reduced, an exhaustive analysis of conditions and systems by which these different steps in distribution are now carried on is necessary.

Marketing of Agricultural Products at Primary Points

While in Washington recently I had the pleasure of meeting Dr. Henry Charles Taylor, professor of agricultural economics, University of Wisconsin. I mentioned to him the necessity of organization for the improvement of marketing farm products at primary points. He asked me to write him on my return home, concerning the subject, which I did. I quote from that letter on the subject of "Standardization of Farm Products for Advantageous Marketing," as follows:

I think you realize the fact that no large organizations of consumers can be organized and operated in the cities with a high degree of success until such organizations can know exactly where to order this, that and the other farm product in accordance with some uniform standard.

Some authority in each state, or better still some federal authority, should establish and describe a standard for farm products.

After a standard has been fixed by some proper authority, the only way to teach the farmers to put the system into practical use is by organization for the raising of standardized products in various communities or by dividing a community into different sections, letting each section devote its principal attention to the raising of a certain product, always keeping the standard of such product in mind. By the right kind of organization the farmers' association can hire its expert to grade the various products brought to its warehouse and see that packages of the right shape, size and standard are used, properly packed and properly marked, and then see that the goods are shipped to a market which is not already over-stocked.

By the inauguration of such a system, in the opinion of the writer, the farmers could add to their annual income at least 10 per cent, and when a sufficient number of consumers' organizations in the cities are formed to absorb the standard product a like saving can be made by the consumers, thus benefiting both producer and consumer to this extent, and possibly much more. Until such standardization is effected the present waste will continue.

Consumers' Organizations

The next step in eliminating waste, in cutting out the unnecessary profits of the middleman system, and in inaugurating the coöperative system, is that of forming coöperative societies of consumers in all large cities and towns. So far as America is concerned, the opposers of the coöperative movement have repeatedly asserted, and still maintain, that this is impossible; and yet we have only to point to the coöperative movement of Great Britain and many other foreign countries to prove that these assertions of the opposers of coöp-

eration are absolutely untrue. Figures are at hand to prove that all the large cities of Great Britain have had flourishing retail coöperative societies operating thousands of stores for the last thirty to sixty years. During the last decade the sphere of activity of these coöperators has been extended to 742,485 new consumers, which is an increase of nearly 60 per cent. There are nearly 2,000 of these retail societies. In 1901 each society had, on an average, 1,204 members, while in 1910 the average number had increased to 1,716. In fact, as nearly as can be estimated, practically one-third of the population of England and Scotland are coöperators, and one-third of the commercial business of those countries is conducted on the coöperative basis. And the best of it all is that the increase is steady and continuous from decade to decade.

In America a splendid start has been made. On the Pacific coast there is a movement containing a large number of coöperative stores in cities and towns. In the middle Northwest is the movement of the Right Relationship League, which, in less than eight years time, has organized over 150 coöperative stores. It is true that most of the successful coöperative stores in this country at the present time have been organized and are operating in smaller cities or rural villages. But the sentiment of the people in the larger cities is rapidly crystallizing around the thought that their people must organize coöperatively for self-protection.

Bringing Producer and Consumer Together

The organization and successful operation of coöperative societies in the cities, which shall include a large proportion of the population, are entirely feasible. Much space might be used in proving the fact. The requirements are a proper spirit among the people, an efficient system (and this is already at hand), and the constant education of the masses to coöperative principles. Dire necessity in many cases will force them to it.

Assuming that enough coöperative agricultural societies have been formed and are being successfully operated by the farmers, as set forth in the first half of this article, so that city organizations of consumers will know just where to secure their farm supplies of dependable quality, and assuming that the people of the cities have also organized large numbers of coöperative retail societies for the

operation of stores for the proper service of their members—the next logical step is that of the connecting link—the wholesale.

Wholesaling

My readers are all more or less familiar with our systems of wholesaling. In country produce and live stock there are independent buyers at primary points who ship to commission men, or the produce is sold to the local country merchant. The commission men and country merchants sell to other commission men or jobbers in the cities, and the jobbers to the retailers, and so on to the consumer.

In manufactured articles the factory must buy its raw materials in the primary market; the goods pass through the manufacturing process; sometimes through the hands of several different factories with commission brokers intervening; from the finishing mill to the big broker or jobber; from him to the local wholesaler; from him to the retail store; and from there to the homes of the consumers. Thus it will be seen that anywhere from three to six or more middlemen intervene between the actual producer and consumer.

The remedy is more easily stated than applied. All who have made any investigation whatever of the British system of coöperative production and distribution through coöperatively owned wholesale and retail stores know that the remedy lies in the assumption of responsibility, by the producers and consumers, of the ownership of the machinery of distribution, namely, the factory and the wholesale and retail stores.

Possibly the first step to be taken in bringing the producer and consumer together, increasing the income of the former and decreasing the cost to the latter, will be that of a coöperative commission warehouse and cold storage plant, which shall be the nucleus for a coöperative wholesale. Let the working capital of this commission concern, which is really the connecting link between producer and consumer, be jointly furnished by the farmer coöperative producing societies and the city coöperative consumers' societies; let all goods be bought and sold for cash and at the prevailing market rates; let there be no price-cutting. This will produce a surplus or so-called profit over and above operating expenses. This surplus or profit will then be available for division between the producers and

consumers, one-half to each, as each has transacted business through the organization.

This connecting link, or federation, whatever it may be called at first, will naturally expand into a general wholesale society for the handling not only of farm produce but all manufactured products as well. Eventually it will also enter the manufacturing field, as have the coöperative wholesales of Great Britain and Europe.

Some Figures

The total business transacted by the retail coöperative societies of Great Britain in the year 1909 amounted to seven hundred millions of dollars, in round numbers, upon which there was a net saving of over 15 per cent, or approximately ninety-eight millions of dollars. The total trade done by all the wholesales (European), which amounted in 1900 to one hundred twenty-five million dollars, in 1910 reached over two hundred twenty-five millions; *i.e.*, it was nearly doubled during the decade. In 1911 the total exceeded two hundred fifty million dollars.

The English Coöperative Wholesale Society contributed the largest share to this magnificent total. This society alone has to record since 1900 an increase in the amount of trade done of nearly \$52,500,000, or 65 per cent. Should this organization make equal progress during the second decade of the twentieth century, which we have every reason to expect, the turnover in 1920 will be about two hundred million dollars.

The profits of this large coöperative wholesale society during the first ten years of the century rose from \$1,441,500 to \$2,314,350. The profits for 1911 reached the sum of nearly \$2,900,000, this being 2.07 per cent of the turnover.

What I am trying to show here is that when business is conducted coöperatively upon the same price level as that established and maintained by privately owned businesses, an enormous saving is made to the proprietors. When privately owned, this saving is called profit. When coöperatively owned, it is nothing more nor less than savings. These savings are then distributed to those who have created them or gathered them together by their trade or labor. Thus the profits or savings in coöperatively owned factories are handed down to the coöperatively owned wholesales and added

to their profit accounts. The profits (savings) of the wholesales, augmented by those of the factories, are then handed down to the retail coöperative stores in proportion as the latter have patronized the former. The retail stores being owned coöperatively by the consumers, these accumulated profits or savings of the factories, wholesales and retails, are then distributed to the consumers in proportion to their trade, after paying operating expenses, which includes a reasonable rate of interest upon the capital invested by such consumers.

In Great Britain and in many countries on the continent these savings amount to anywhere from 10 to 25 per cent; that is to say, after all these different divisions of the business have been operated upon the same price level as are privately owned concerns, the record conclusively proves that, through the coöperative ownership and economic operation of these different branches of business, there is a total saving of an average of about 15 to 20 per cent. And thus is proved what coöperative societies may accomplish in lowering food and other distribution costs.

Savings Enormous

One who reads the figures of the British coöperative movement in percentages or by annual figures alone, can scarcely comprehend the enormous savings to the working people of that country. For instance, during the forty-eight years of the operation of the English Coöperative Wholesale Society, from 1864 to 1911, the total profits or savings in that institution alone amounted to \$36,030,380, and the total profits or savings of the retail societies, of which only a portion of the returns are available, amounted, during the same period, to the inconceivable sum of \$1,045,137,085.

This great sum of money, after reserving enough to build magnificent temples of industry and palatial wholesale and retail premises, has been redistributed among the working people of Great Britain. The figures given denote a clear saving. In other words, since the year 1862, had the people of England and Scotland allowed their commercial business to be conducted as it has been conducted in America, by private traders, trusts, combines, etc., the common people, as the above figures show, would have had their living cost increased over one billion dollars, and probably much more, for the

establishment of the coöperatives has unquestionably kept the general price level of the necessities of life much lower than they would otherwise have been. And this wondrous record, the reader must be reminded, was made in competition with the productive genius of the whole world. The free trade system of Great Britain permits it.

Already in America the establishment and successful operation of thousands of coöperative agricultural associations and of the hundreds, at least, of successful coöperative retail stores, have proved that the principle is practically adaptable to American conditions. It still remains for us to complete the system. We must not stop with what has been accomplished, nor even hesitate. The people must go on acquiring the ownership of the machinery of distribution and develop the spirit and ability to operate it successfully.

Sentiment all over the country was never more ripe for the coöperative movement than at the present time, and the great task before those who are leaders is to concrete this sentiment into action and guide it along lines of genuine coöperation. Common corporations are springing up everywhere using the word "coöperation" or "coöperative" in their title, thus deceiving the people. Any corporation which allows a vote for each share of stock, or proxy voting, or which distributes its earnings upon capital invested rather than upon trade, is not coöperative; and when such organizations start under a coöperative title and the people are misled, it gives the true movement a setback from which it does not recover for years.

Many cities, including my own home, are agitating through improvement associations, women's clubs, and otherwise for municipal markets as a partial solution to the high cost of living. A large and influential group of Minneapolis citizens last winter demanded a bond issue of a half million dollars for the establishment of municipal markets. I do not claim to be much posted on the practical workings of municipal markets, but I take it that time will not turn backward in its flight and any considerable portion of the population of a large city get on the street cars with market baskets on their arms, ride several miles to market and carry home the produce in their baskets. Even if we grant that quite a large percentage of the people would do this, it doesn't touch the problem of high prices of manufactured goods, clothing, etc.

On the contrary, should the people of the city invest a half million dollars in a coöperative organization to operate coöperative

stores, it would give a central store with a stock of one hundred thousand dollars and two hundred branch stores with a stock of two thousand dollars each, which could be placed under one modern, efficient, business management, and such a system would supply all parts of the city, serving all people alike with all the necessities of life at a minimum cost. If such an organization could be formed, its bonds, representing perhaps its entire capital, could be paid off in fifteen to thirty years by a sinking fund made up of 10 to 20 per cent of the annual profits, the balance being distributed to the people. Thus would they be enabled to reduce their living expenses possibly 10 per cent through the operation of the retail stores alone. But coöperative wholesaling and manufacturing would immediately follow as a matter of course, through the operations of which an additional 10 or 15 per cent could be saved.

The economy of operating business coöperatively when compared to competitive or privately-owned business, is well known. A single concrete illustration will suffice: A representative of the English and Scotch Coöperative Wholesale Societies has had an office in New York City for nearly forty years, purchasing American products for those societies. The volume of business handled by this office runs from six to ten million dollars per year, and the total expense of the British coöperators in buying this large volume of American products and having it laid down at their doors is something less than three-tenths of one per cent. Many similar instances of economy of operation might be cited. Many of the coöperative stores in the middle Northwest organized by the League are conducting their business at an expense rate of from six to ten per cent of the gross sales, which in many cases is only about half as great as that of privately-owned stores in the same communities should the latter figure the same salary for the proprietor and the same rate of interest on capital invested. How can it be otherwise when competitive marketing includes drummers, demonstration, samples, advertising by the manufacturer, downtown show rooms, jobbers, advertising by retailers, premiums, loss by bargain-sale baits, and the bookkeeping and unpaid accounts of the credit system, all of which coöperation can get along without?

The fundamental principles involved in true coöperation namely, one vote per member regardless of amount of investment, the limiting of the earning capacity of capital to the prevailing local rate of

interest on money, and the distribution of the resulting profits or surplus savings over and above operating expenses in proportion to patronage, give strict justice to each participant and teach the people self-government. By reason of this education, coöperative producers and consumers are brought to see that through such a democratic business organization they are enabled to serve themselves most economically by eliminating all waste and unnecessary profits.

The cost of transportation by rail I leave to governmental regulation through the Interstate Commerce Commission.

CITY PLANNING AND DISTRIBUTION COSTS

BY F. VAN Z. LANE,

Civil Engineer and Traffic Expert

AND

JOHN NOLEN,

Landscape Architect and City Planner.

One of the foremost functions of practical city planning is to arrange a city so that its citizens can live and do business there with the maximum of comfort and the minimum of cost. No argument is necessary to convince even the most skeptical that a city which offers the most comforts and conveniences from a living and business standpoint, and at the same time at a minimum of cost, is the city that is going to grow rapidly in population and in wealth. As this is so obvious it seems incredible that cities, both large and small, have not made critical examinations of their plans with a view to reducing the cost of distributing food and other supplies.

In an address on transportation and city planning by Milo R. Maltbie, Public Service Commissioner, New York City, delivered at the recent city planning conference, he said: "The cost of living, so far as it is affected by the cost of food products, is to a considerable extent a problem of transportation. The fact has been repeatedly pointed out that food products may be selling at ridiculously low figures at the point of production, that the market may be glutted and that the producer may be barely able to make a profit; while at the same time, the cost to the consumer may be high. It is apparent that the means of bringing the producer and consumer together are defective if such conditions obtain, and while transportation is not the only cause, it plays an important part. What is true of food products is true of all materials. If the means of transporting raw material to the factory and manufactured goods from the factory to the consumer are inadequate, expensive and slow, the cost of the product will naturally reflect these conditions.

"It is essential, therefore, that in every plan of city development provision should be made for a prompt and cheap method of distribution. Thus far the railroads and steamship companies have assumed

that their function ended with the provision of terminal facilities somewhere within the boundaries of the city. Not infrequently these terminals are located upon the periphery of the city and usually considerably removed from the consumer and the factory, so that products have to be transhipped and hauled long distances by wagon or motor truck. Doubtless this is a fairly satisfactory method in a small city where the terminals are not far from any part of the city, but in metropolitan centers such a plan is quite unsatisfactory."

The popular and general conception of city planning is that it has to do with the planning of future cities or of additions to old ones only. This, however, is only one phase of the work, for city planning has to do with the past and the present as well as the future. Inasmuch as the present inadequate arrangements for moving supplies about within the cities were brought about through a past misconception of future requirements, the science of city planning can without doubt advance much more quickly than would otherwise be the case if the lessons taught by these past mistakes are carefully considered in planning for the present and the future. There is hardly a city where glaring defects in the street system are not seen at one point or at another, and yet it can be safely said that the lesson taught by these defects is unheeded in laying out new sections of the city or in correcting similar conditions which have not reached the point where it would be prohibitive either because of the great cost or because too many interests would have to be considered to hope of ever bringing about substantial changes.

City planning can be of very great use in correcting present-day inadequate conditions so as to serve better and more efficiently present-day needs. It is through this application that the science of city planning is going to receive its greatest momentum, because if people see that the application of this new science is actually bringing benefits to them, rather than solely to future generations, it will receive much more consideration at their hands.

If it can be conclusively demonstrated, too, that the net result of correctly applying this new science will beneficially affect the cost of living as well as make living more pleasant, no doubt people will not only take to city planning more kindly, but they will want to require its application. This is illustrated by the act recently passed by the state of Massachusetts, which provides that every city of the commonwealth and every town having a population of more than ten thousand

is directed to create a planning board, whose duty it shall be to make careful studies of the resources, possibilities and needs of the city or town.

Just so long as people live in individual homes detached one from the other, and cities continue to be built over considerable areas, just so long will there be the necessity for individual distribution. Either the people will have to go individually to the source of supply, or the supply will have to be distributed to the individual from this source. Therefore, three things are very essential if this cost of distribution is to be kept down to the lowest possible minimum; and as these are effective and efficient so likewise will the cost be affected. The source of supply or depot should be located so as to be readily accessible to the various inbringing lines of transportation; it should be also located in relation to the community it is to serve that a long haul will be eliminated; and the streets through which supplies will reach the ultimate consumers from the point they first arrive in the city should be so arranged and laid out that no time will be lost in needlessly round-about routes. Unfortunately, none of those essentials prevails in American cities and it is in correcting them that city planning can be of very great and growing value. In order to attain or even approach the ideal conditions, the street system should be given paramount attention.

As it is the purpose of this article to point out how city planning can be of material service in relieving present-day conditions, and as it is so obvious that it will be very difficult to change existing centers of distribution in cities, and as it is also obvious that no matter where these centers are located it will still be necessary to further distribute supplies, this article will be confined mainly to pointing out the relation of the streets to distribution, for in any event and in the final analysis, the streets must be used for distributing purposes between centers, and between centers and individual establishments, no matter what the vehicle or motive power, and no matter whether the distribution takes place on the surface, above the surface, or below the surface. Moreover, no method of locating distribution centers can be outlined that could be applied to any and every city because each city has its own local conditions that determine such locations, whereas general street considerations can be laid down which could be applied in some measure to almost any city.

An ideal street system consists of streets laid out in such a way as to afford the most direct connections between centers for the transportation of people and the distribution of supplies; arranged in such a manner as to facilitate traffic going on them, over them, or under them; paved so as to offer the least resistance to travel, so that wear and tear on roadway and vehicle will be reduced as much as possible, so that sub-surface repairs can be easily made, thus avoiding interruptions to traffic; and so laid out that no obstructions will exist such as heavy grades, or the grade crossings of railroads. By arrangement of streets is meant a suitable and convenient network and a proper proportion of roadway and sidewalks so as to accommodate their respective volumes of traffic and so that no street area will be wasted.

A study of the street system of any city, particularly in this country, will no doubt show that parts of the street system are defective in some or all of the features noted above. It will also no doubt be found that little or no effort is being made to correct these defects and that little heed is paid to the lessons they should teach in laying out and paving the new streets made necessary by the growth and extension of the city. One reason for this, no doubt, is that the relation between the cost of distribution and the street system is not understood, not only by the people using the streets, but also by many municipal engineers and municipal officers.

It seems to be true of streets as of other things, that their fundamental province is often forgotten. The fundamental purpose of a street is to provide a means of communication between different sections of a city and between one city or town and another city or town. Its primary purpose is not to provide space for light, air and sun for surrounding buildings; or a playground for the children. Both of these purposes can be better provided without resorting to laying out and building streets.

Again the idea does not seem to prevail that cities are permanent, especially their street systems. If it did, grades would be cut down or eliminated; narrow roadways would be widened; grade crossings would be removed by elevating or depressing railroad tracks; rough and uneven pavements would be replaced by smooth and durable pavements. When it is considered that all of these obstacles to speedy travel might be eliminated, it does not seem that those responsible realize that a city is a permanent institution, rather than a temporary affair.

It seems incredible that cities have not studied their street systems from the viewpoint of making them better adapted to their primary purposes. It seems incredible that more is not known about the way streets are being used—that is, the quantity, the character and the weight of vehicles and the speed and size of the same, together with the various routes used between the different distribution centers and the number of people using the sidewalks. If obtained in the right manner, such information can be had at a low cost. Such information would be invaluable in economically determining the proper kind of pavement to put down, both from the standpoint of facilitating traffic as well as from the standpoint of paving durability. How often pavements are put down without considering the traffic they are to bear! And how quickly these pavements disintegrate to the detriment of the traffic using them and to the city paying the bill! Streets are often laid out with arbitrary widths of roadway and sidewalk, so that the roadway is congested while the sidewalks are only half used. A knowledge of the size of the traffic units and their speed, together with the number of people using the walks, would give a better arrangement of the street and a freer movement of traffic. A knowledge of the routes that traffic takes in going from one center of the city to another will oftentimes show that traffic will go a considerable distance out of the way to avoid a block of bad pavement, a congested piece of roadway or an unfavorable grade. It will also show that perhaps the present street system does not provide very direct routes between centers of distribution and that this might be easily overcome by extending a street or cutting a new street through.

Thus it will be seen that a knowledge of what is taking place on the streets of a city, so far as traffic movements are concerned, is vitally necessary in order to cut down distribution costs and yet there are very few cities that have any adequate information whatever on this subject.

The conditions brought about through not applying the science of city planning in the laying out and building up of cities have necessitated the police regulation of street traffic. This regulation of street traffic also has an important bearing on distribution costs. It is commonly believed that the purpose of police regulation is merely to see that traffic proceeds in a safe manner. The general idea does not prevail that traffic regulations should also aim to facilitate traffic as well as to have it proceed safely. Traffic regulations should result

from a close and detailed study of the conditions. Correct conclusions can only be reached when a knowledge of all the facts involved is at hand. For instance, all of the larger cities contain many street intersections where all kinds of street traffic are heavy—pedestrian, car, and vehicular; and when it is considered that vehicles alone at an ordinary right-angled street intersection can proceed across the intersection in twelve different directions, and then that street cars and pedestrians crossing in several directions are introduced as well, the importance of even this part of street traffic regulations will be appreciated. A proper knowledge of the volume of traffic crossing the various ways, together with the routes taken in approaching and leaving the intersections, may show very conclusively that vehicles and even cars might take other routes. It may be that poor paving, narrow streets, etc., throw a large volume of traffic through a busy intersection where if these conditions did not prevail vehicles would take more direct routes to the advantage of everyone. A congested intersection not only shows up all kinds of traffic at the intersection itself, but also causes vehicles to "back up" in every direction from the intersection, thus slowing down traffic along the length of the street for a considerable distance, thereby limiting the volume of traffic that the street can accommodate.

The cities of this country do not know yet what it means to have street traffic efficiently regulated, the paramount reason being that this has never seemed to be of enough importance for engineers to give it attention. Surely it is capable of engineering treatment and anything so economically important as the cutting down of the time with which vehicles can proceed through the streets is worthy of attention.

A great deal has been said and written on the subject of providing and maintaining good roads for the farmer, so that supplies can more economically be transported to the railroads, and what a beneficial effect this will have in lowering the cost of living! But very little has been said on the same subject in making the streets of the cities better adapted to their purposes.

The first distribution point in the cities is at the railroad yards or wharves. Here are received most of the supplies. They are then distributed usually by truck, through the various streets. In large cities most of the supplies should be distributed from these points to the next point of distribution—the retailer—by rail direct. If the

streets are narrow and crooked, and the grades heavy or other hindrances exist, the cost of distribution is unnecessarily increased. The character of the city plan is, therefore, of the utmost importance.

In brief, it may be said that a city may be planned to reduce the costs of distribution and therefore the cost of living in the following ways: (1) By a proper location of main depots well related to rail and water lines; (2) by a convenient and orderly location of streets connecting the main centers of distribution with each other and by providing a serviceable system of secondary streets so that every part of the city may be easily and quickly reached from these main centers; (3) by adequate street widths and a skilful and economical subdivision of any given width into roadway and sidewalks; (4) by a careful study of street grades and the elimination or reduction of unnecessarily heavy ones; (5) by raising the standard of street pavement and the use of more discrimination in the paving of streets so as to fit them for the kind of traffic passing over them; (6) by the separation of the grades of streets for ordinary vehicles from the grades of railroads crossing the same; (7) by the compilation and use in city planning and replanning of accurate data showing the quantity, character and weight of vehicles and the speed and size of the same, together with the various routes used between the different distributing centers; (8) by the better utilization of the country trolley and the city street car lines. In all these ways and in others closely related to them the planning and replanning of towns and cities may be made an effective means in reducing the cost of living.

CONSTRUCTIVE PROGRAM FOR REDUCTION OF COST OF FOOD DISTRIBUTION IN LARGE CITIES

BY THOMAS J. LIBBIN,
New York City.

The constructive program outlined here is based on extensive investigations of food distribution in New York City which I have just concluded; it applies with some modifications to all large cities. The investigation consists in part of the first statistical study ever made of profits and the cost of (1) handling staple groceries, from the time of receipt at city terminals through successive stages until final delivery to the consumer, and (2) the retail handling of meats, fish, fruits and vegetables, and dairy products, by meat markets, fish stores, fruit and vegetable, and dairy stores. It was felt that a statistical study of these items was urgent inasmuch as, other factors being equal, the food prices in cities are determined by the cost of city distribution—and because the cost of the city distribution is the only factor in food prices which the city can directly influence. It was also felt that any attempt to reduce the cost of the distribution of food could properly come only after the facts about the profits and operating costs of the several types of wholesale and retail distributing agencies had been ascertained.

The material for this part of the investigation was obtained from yearly inventories of 230 stores selected as representative in location, volume of business, management and business methods, of the type of distributing agencies to be studied. The inventories were secured by visits to the stores. In each store, after questioning the proprietor and examining the available account books, the investigator filled out prepared blank schedules. Each schedule when filled out represents a classified record of all the items of income and expenditure of the given store for the year.

In advance of formal publication of the report of this part of the investigation, actual figures cannot be given here. The purpose of this paper will be served by the following general summary:

I. In each retail group of stores covered in this inquiry of the "corner grocery" type, some are managed on twice the dealers' margin, (gross profit) that others find necessary, although the stores

deal in the same line of food products, sell to the same population and are situated within a block or two of each other.

II. The retail stores in the poorest neighborhoods are less efficiently managed for every line of food products than those of the more prosperous neighborhoods. The poor man gets less in merchandise and in service for the dollar he hands to his retailer than his more well-to-do fellow townsmen.

III. The combined margin (gross profit) for city distribution is very large: Calculated upon the average family consumption, it runs from one-seventh to one-tenth of the total income of all families with incomes between \$600 and \$1100 a year. This large outlay goes to the wholesalers and retailers for their service and expenses in getting the goods from the city terminals of New York City to the consumer. In view of the comparatively little "personal service" rendered by the store keepers, *i.e.*, delivery, credit accommodation, etc., to families with incomes here considered, this payment seems extraordinarily great, and yet this big dealers' margin affords but reasonable profits to the individual dealer, and could hardly be less under present methods.

The large gross profit and small net profit are both inevitable results of the following conditions in New York City:

1. Inadequate and outgrown terminal facilities, making a great amount of cartage necessary in the wholesale handling of food.
2. For some lines of food products, successive expensive re-handlings by several wholesalers.
3. Re-duplication of effort many times over in the retail handling.
4. Unplumbed depths of ignorance on the part of storekeepers regarding the sanitary and the economic aspects of handling food products.

Certain aspects of the problem of terminal facilities are, of course, peculiar to New York City. Other large cities, however, have the same situation to meet in a somewhat different setting. The other features, the unnecessary wholesale handling and re-handling, the re-duplication of effort in retailing repeated over and over again, the dealers' ignorance of even the most elementary notions of hygiene in handling food products and of economy of effort in business transactions, are characteristic of city distribution everywhere in America.

It is obvious that the problems presented by these conditions are not to be solved off-hand. There is no ready panacea. The

relation of the grocer and the marketman to the family life is so very close and the adjustment is so complex that changes can come only after most intimate knowledge has been acquired and must be introduced very gradually.

The changes that come about through the slow, haphazard evolution of business methods promise relief too remote and too inadequate to be accepted in lieu of the more immediate and adequate aid that may be expected from scientific and concerted action. The gradual tendencies of food merchandising and its adjustment to the needs of the consumer do not warrant the hope of a more economical city distribution. Incompetent food distributors occupy the field almost exclusively, especially in retail distribution, by the "corner store" type. They set the pace. The occasional competent man enlarges his business, not in effecting economies in distribution, and selling food at a lower price, but in pursuing, only more completely, the policy of the small grocer: giving "personal service." He increases the amount of "personal services" with each dollar sold, so that the grocer and market man take the place, in so far as possible, of the family servant.

Combined wholesale buying by retailers has thus far not relieved the consumers. The retail grocers in New York City who get merchandise in buying pools do not turn over to the consumer the results of the saving thus effected. The saving is used to increase first, the merchant's net profits, and secondly, to increase the volume of his business by offering an extra amount of trading stamps or other premiums, and now and then by a bargain sale on some non-staple article.

Nor have the chain stores yielded any adequate relief. This type of store sells at prices lower than those of the individual "corner grocery," but only where the saving to the consumer is spectacularly obvious. The total saving in the year to the family buying all that it is possible to buy in chain stores in New York City is considerable, but not nearly what a thoroughgoing economic system would effect.

The municipal markets and their further development likewise fall short. New York City properly speaking has only one municipal market for retail distribution. The market does afford greater choice and fresher food, but the retail prices are not lower.

The seriousness of the present situation to the city consumer, especially to the families of small incomes facing the ever increasing cost of the necessities of life, and the possibility of a considerable

saving of the total yearly income by better methods, entitle the subject of city distribution at least to as careful a study as that now given to methods of farming and methods of distribution of farm products by the federal and state governments. The newly created federal office of markets approaches the problems of marketing from the point of view and needs of the farmer. It remains for the municipalities to investigate marketing from the standpoint of the city consumer.

X The provision of facilities for a flow of fresh and abundant food supplies with the least possible costs for handling is as much a municipal problem as supplying the city with water or gas. That municipal authorities have not thought so is due partly to the fact that any changes of city distribution would be met with opposition from the organizations of wholesalers and retailers. These would be arrayed against any innovation, however advantageous to the trade. The merchants form a large body of active voters: this fact is enough to keep the usual municipal official from any serious contemplation of the problem.

It remains, then, for men of good will, keen foresight and action, who have the means and the time, to initiate the necessary study, experimentation, publication of results, demonstration and publicity campaigns which will be necessary to bring about the desired improvements. All these activities are essential in order to put into operation a simple and economic method of food distribution. Permanent and comprehensive relief can come only from a re-organization of the food distribution system, such as the following constructive program might aid in bringing about.

The plan presented is a coördination of suggestions from several social workers in New York City. A complete carrying out of the program requires a department of food supply which should operate various types of experimental stores in much the same manner as the agricultural colleges conduct experimental farms. The stores should be financed as regards investigation, research, supervision and trial of new methods of sanitary and economically efficient marketing and merchandising, by a fund given for the purpose. They should not attempt to meet these expenses out of profits.

The department should investigate the present conditions of distribution and consumption of food products; improvements in methods in commercial handling of food in cities which may be developed anywhere; the work of coöperative societies, consumers'

leagues, housewives' leagues, etc. It should coöperate with all municipal, state and federal bureaus already established which have in any way to do with the matter of food distribution. It should publish and carry on campaigns in favor of better methods.

One experimental store under the proposed department of food supply should be of average size and therefore of the "corner grocery" type. It should actually engage in business and have for its two primary aims the development of efficient methods of sanitary and economical handling of food. The hygienic handling of food, which brings it to the consumer in the most cleanly and perfect condition, is a need equal in importance to that of economy in distribution.

Another type of experimental store needed is one large enough to buy at points of production, and to require but one physical handling of merchandise from city terminals to consumer, aside from retail city delivery. The profits of such a store should, by charter, be limited to a fixed percentage on the investment. Such a store would supply food to only a small fraction of the community, but its influence in the total situation would be great. It would set a standard to which the business as a whole would be compelled to approximate. The undertakings would in time be transferred from management of social workers to the municipality.

The enterprises would effect a reduction of the gross profits which are necessary under present conditions and would thus diminish the cost of food. They would make the consumer's dollar go further. They would bring about a material increase of real wages to every family in the city.

Social workers are finally arriving at the conclusion that what the poor need is more income. It might be more exact to say that what the poor need is more real income. The man who aids in the establishment of the enterprises sketched would assist in effecting that most fundamental requisite of social progress: more real income to the poor.

This program, embracing a department of food supply with several types of experimental stores, is being considered in New York City. Here some prominent social workers, conscious of the havoc among the poor caused by the needless and high cost of food distribution, have concluded that such an undertaking is urgently demanded in a broad constructive program of social service. The prospect of such work in New York should be an incentive to other large cities.

THE OFFICE OF MARKETS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

BY CHARLES J. BRAND,
Chief.

Congress at its last session made an appropriation of \$50,000 to enable the Secretary of Agriculture to acquire and diffuse among the people of the United States useful information on subjects connected with the marketing and distribution of farm products and for the employment of persons and means necessary to accomplish these purposes. The Secretary of Agriculture, a highly trained economist, and the Assistant Secretary, under whom, as Chief of the Bureau of Plant Industry, many valuable investigations in handling, marketing, transportation, and storage of farm produce have been initiated, determined upon the establishment of an Office of Markets as the most direct way of attacking the existing problems. This new division in the Department of Agriculture was actually established on May 16, and as its chief the writer was directed to formulate a plan of procedure. The officers of the government realized fully the difficulty of modifying even in the direction of improvement the complex commercial organism through which crops pass from producer to consumer. They also know sufficiently well how hard and long a task it will be to bring about the general adoption of the principles of coöperation and their application to the economic problems of country life. But the mere fact that a thing is difficult will never justify or excuse failure to tackle a problem upon whose proper solution depend in a large measure the comfort and well-being of a major part of our population.

There is no one principle, the correct application of which will cure the present difficulties of distribution and marketing. The problem as a whole is one of articulation. The farmer producer must be brought into more direct touch with the manufacturer of industrial products or with the ultimate consumer in the case of food products. Furthermore, agricultural production must be more carefully adjusted to market demands than is now the case. It is unlikely that immediate results in the way of large money returns can be realized through such work. Certain specific and almost elementary things must be

taken up first. These may, in a small way, yield immediate results. Beyond this the facts will first have to be determined and we must then proceed with them as a basis.

The following paragraphs outline briefly some of the many lines of work that will be undertaken as soon as possible.

1. The Study and Promulgation of Market Grades and Standards

A common language for both producer and consumer is the first essential to a satisfactory contact between them. When a man orders something from the country producer he must know, within reasonable limits, what the producer proposes to deliver to him. Grades and standards are an absolute necessity. They should be as nearly universal in their application as may be possible for each crop. Multiplicity of standards causes confusion and gives opportunity for manipulatory practices and abuses. A dealer may buy on one set of grades that exact high quality and sell at correspondingly higher prices under less exacting standards. This is especially true where the same grade names are applied to different qualities by different exchanges or associations. This can be illustrated by an example in the cotton trade. No doubt similar cases are of most frequent occurrence in the grain trade.

Last fall the department, under the writer's direction, conducted a survey of cotton marketing conditions in the primary markets of Oklahoma. During the course of this work between three and four thousand individual bales of cotton were sampled and records made of date, place of sale, and the price paid to the farmer. A single case will serve to illustrate the conditions found. On November 26, a collection of samples was secured from twenty-one bales sold by a number of different farmers at Ardmore, one of the largest primary markets in Oklahoma. These bales showed a wide variation in grade, but a marked similarity in price. They were not sold in a round lot at average figures, as slight variations in price occurred in almost every pair of bales. The department's expert classer found that the samples taken from these twenty-one bales graded as follows: 1, good middling (which was the highest grade bale in the lot, and then down to the lower grades, as follows); 3, good middling spotted; 2, good middling light tinged; 3, strict middling; 3, strict middling spotted; 1, strict middling tinged; 1, middling; 3, middling spotted; 1, middling tinged; 3, strict low middling.

The extreme variation in price was one cent per pound, which was not sufficient when the wide range of quality was considered. The interesting fact developed was this: The highest price paid per pound ($12\frac{1}{2}$ cents) was given for one of the good middling spotted bales, while the lowest price in the lot per pound ($11\frac{1}{2}$ cents) was paid for the good middling bale, the best one in the entire lot of twenty-one. We have here the peculiar condition of a variation of \$5 per bale, not occurring between the highest and lowest bales in the lot, but between two of the very best bales. The best bale in the lot sold for 35 points less than the poorest one.

There has been a constantly increasing tendency to lower the standards in grain under the present systems of grading and inspection and to give the benefit of the doubt to the seller. The result of this practice, which at first glance gives apparent advantage to the grower, will be to give the careless producer or the dealer in lower grades better prices for these lower grades, thus gradually depressing prices on all grades. Buyers will surely attempt to defend themselves by buying safe. This tends to discredit all grades and works a hardship on the better class of growers, who are the very ones who deserve aid and discrimination in their favor. The greatest use of grades at present is in dealings between buyers and between merchants and manufacturers. They are rarely of direct benefit in most crops to the farmer, but serve a useful purpose in settling squabbles between middlemen. This is a condition which deserves early correction. The farmer should be paid for the grade which he produces. Its quality, whether good or bad, is due to his care or indifference. In the former case he deserves encouragement, and in the latter such discrimination as will force him to produce a better product.

In connection with the work on grades and standards, we must have distinctive terms which can be accurately understood as applying to a given quantity of produce. These should be based on present trade practices in the handling of various commodities and on the requirements of modern consumers. This may require legislation as to size and weight of packages, their labeling, designation, brands and description.

Legislation has already been enacted in certain states in this direction and other states should follow at an early date. We should probably also have a national law unifying the enactments of the various states.

2. Coöperative Marketing and Distribution

This work will include a study of existing marketing organizations and compilation of laws, state and national, affecting organized production and distribution, and the promotion of new marketing organizations and consumers' leagues, in so far as these activities may be carried on within the authority of the department. Coöperation is no longer an experiment, even in this country, while in other countries, notably, Denmark, Ireland, Holland, Germany and other European states, it has been in successful operation for many years. It is the only system of organization adapted to the farming industry. The need of organization, not only of the business of farming, but of country life as a whole, no one will deny. The city is an emphasized form of organization. Hence the attractions of the city, its comforts and conveniences.

Country life is unorganized and as a consequence it is unable to command the many features which attract the best blood of the country to the city. This probably explains the great movement away from the rural community to the urban community. If our agriculture is to meet modern conditions successfully, it must be organized and the tide cityward stemmed and turned back to the country.

At present, the brains and red blood of the farm are going into the manufacturing and other industries in which brains are not nearly as essential as on the farm. Factories have overseers who largely do the thinking for the whole enterprise. It would be much more in accord with reason if the failures of the country moved to the city and the country attracted the brains to it where its use is highly essential.

In connection with the coöperative organization work we hope not only to carry on investigations, but to give concrete sensible help wherever we can, according to the men and means at our disposal. In changing to the coöperative system we must be reasonable in our expectations. Too many people think it a panacea for all their economic ills. They expect money returns wholly beyond any to which the facts entitle them. In our work we hope for but do not promise these. We will be satisfied with a little better prices for the producer and probably slightly lower costs or better products at the same price for the consumer.

Coöperative organizations on the land will not of themselves be sufficient, as economy there effected may easily be absorbed at some later stage of distribution, thus again benefiting him who deserveth not. Only by performing some or, where possible, all of the functions of our present middleman system can we hope to return to the farmer all of the benefits to which coöperation entitles him.

Much time has recently been spent in abusing the middleman; possibly he does get more than he earns, possibly there are too many of him, in fact there is no doubt on this latter point, but until some efficient machine is developed to take his place, supplement him, or regulate him, he is a necessary factor. Changes in our system should be constructive and not destructive. In other words, his activities should not be dispensed with, but should be directed into more useful channels. The test of any factor in our whole system should be service; it should be useful service; those who are not rendering it should make way.

3. Surveys of Supply and Demand and Demonstrations in the Organization of Consumers

This work should include surveys of consumption in definite localities and educational and organization work among consumers with a view to establishing direct dealings with organized producers and to extending the use of produce now wasted, which could be brought to the consumer more cheaply by direct dealing. Part of this work would include the development of larger markets for certain classes of commodities by publicity and education. Many excellent products are now thrown away because of ignorance about them, or prejudice against them.

Under our present system the consumer practically never receives any benefit from the production of an unusually large crop. You might say that the middleman gets a sore throat or some other form of indisposition every time the grower makes a big crop. Hence, he is unable to perform his normal functions and the benefits of larger production are lost both to the producer and the consumer. Frankly, our present intermediary is not interested in handling to as good an advantage as possible the whole produce of the land. This is not surprising as he wants to make as much money as possible with as low an expense cost as possible, which means handling as little material as possible. Keeping up the price accomplishes this result. Hence,

we have the anomaly of melons being dumped into New York harbor by the car load, while the price is still so high that the common people cannot afford to buy them. And likewise upon occasion with many other perishable food products.

The farmer very rarely, or perhaps never, actually overproduces a given crop. Our distributing machine is so imperfect that we fail to deliver the surplus product to those markets where there is no glut. In fact what we call glutting at the present time, is not really glutting at all. A market is not glutted until its consuming public cannot absorb further supplies of a given product. Here again we must develop coöperation, especially amongst consumers for the purpose of cheapening terminal market distribution. If the Texas melon grower can prosper with melons selling f. o. b. his station at from 5 to 10 cents, we ought to develop a distributing system which would enable the consumer to get his produce at a much cheaper price.

There should also be made a study of methods by which consumers might buy in larger quantities, of improved cellar construction, of small cold storage units and other methods that might be devised whereby a larger proportion of city dwellers could buy potatoes and apples by the barrel and other necessities in correspondingly larger quantities.

4. Study of Methods and Cost of Distribution

This work will include an investigation of present commercial methods of distribution, prices received by the producer, cost of transportation, storage, etc.; changes of ownership or possession between producer and consumer, accumulated charges, costs and ultimate prices and profits at each step in the process by individual products or classes of products.

It will also include a study of existing coöperative organizations for marketing farm products, together with a determination of cost and general advantages and disadvantages of this method as compared with the commercial system. Only in this way can we obtain a true measure of the benefits to be secured by a general introduction of coöperative methods. In connection with this work comparisons are also to be made between the efficiency of coöperative and commercial methods at home with those in practice in certain foreign countries, which have been held up to us as models for a number of years. We

have been told many times that Denmark markets its butter more economically than we do and that the producer gets a higher portion of the price paid by the consumer; there is need to get some actual comparative figures on this and other similar points.

5. Study of Transportation Problems and Assistance to Producing Organizations in Securing Suitable Transportation Facilities

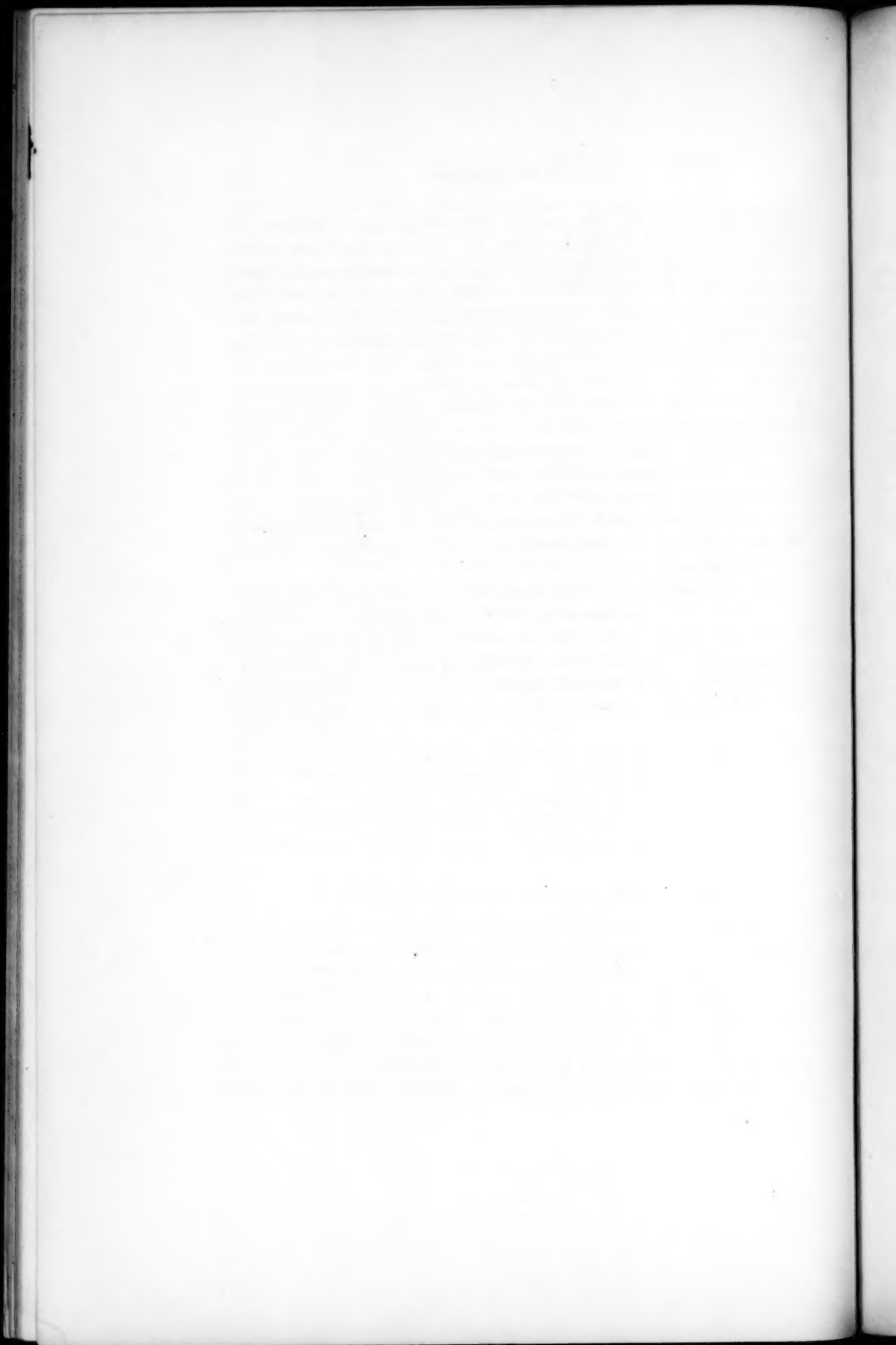
Producers and shippers are entitled to many considerations which they do not at present receive, but which the railroads in many cases would be perfectly willing to give upon a proper presentation of facts. Nearly all of our railroad systems are doing good work in assisting in the solution of the problems of agricultural production. There is not the slightest doubt but that they will render similar assistance in distribution and marketing. In connection with this work the services of a transportation specialist are to be secured who will assist the producer, after determination of facts, in securing necessary or desirable concessions directly from the railroads and in cases of unjust discrimination, intervening with the Interstate Commerce Commission, in their behalf through the office of the department's solicitor. This specialist would also conduct investigations of the feasibility and cost of various methods of retail distribution. He would familiarize himself with the causes of car famines, irregularities and discrimination in car distribution and also undertake experimental demonstrations in distribution through hamper systems, and parcel post, or express. He would also be in a position to advise growers' associations as to the technical points involved in railroad transportation of perishable and other farm products.

6. Market News Service for Perishable Products

Practically every person who speaks about the work of the new Office of Markets appears to be under the impression that the department proposes to conduct a market news service through which producers may be advised as to what market they should ship to. It is our present impression that a comprehensive and detailed service of this kind would be utterly impossible, both on account of its great cost and the dangerous difficulties that it would present. Nevertheless, we do intend to take up an investigation of the practicability of

possible methods, and the cost of conducting such a service. If found to be feasible, it might perform the following functions: collect and distribute daily information relating to the conditions of supply and demand in the leading market centers, shipments en route their destination and probable date of arrival, progress of planting and areas planted, collected and distributed weekly during the planting season, information concerning the growing crop, concerning the relation of supply to demand, disseminated as occasion demands. It is certain that the practicability of such a service should be most carefully looked into and that in some rather modest way much good might be done. The California Citrus Exchange, a most efficient co-operative organization, conducts such a service. Its total cost is about \$625,000 per year, \$75,000 of which is for telegraphic charges alone. With such a cost for 65 per cent of one very restricted industry you can easily see how great would be the cost to carry on such work on a national scale.

As stated above, the difficulties of the work which is being begun are realized. Its value and success will depend on whether it increases the farmers' income a little, at the same time reducing the ultimate consumers' cost to some extent, or bringing them better products at the same price. It is intended that the work shall be definitely practical, and, though founded on sound economic bases, not academic.



BOOK DEPARTMENT

NOTES

AMERICAN SOCIOLOGICAL SOCIETY, *Papers and Proceedings of the Seventh Annual Meeting of the* (1912). Pp. vi, 223. Price, \$1.50. Chicago: The University of Chicago Press, 1913.

The first paper in this volume is the presidential address of Professor Small, entitled "The Present Outlook of Social Science." The general subject of the volume is "The Conception of Human Interrelations as a Variant in Social Theory," and is discussed by the various contributors from the standpoint of psychology, education, history, politics, economics, legislation, philanthropy and religion.

D'ANETHAN, BARONESS ALBERT. *Fourteen Years of Diplomatic Life in Japan*. Pp. 471. Price, \$4.25. New York: McBride, Nast and Company, 1912.

This journal of life in Japan, written by the wife of the Belgium minister, abounds in interesting incidents of a period never to be forgotten in the history of the country—that of the Chinese and Russian wars. Because of her husband's official position, the baroness had exceptional opportunities of observation. The journal is reproduced as written, and the style is delightfully simple. Under date of November 4, 1893, appears the following: "We left Mr. Q. in the tea-house. He is a kindly and pleasant man, whose English is somewhat quaint. Once on board ship, when I asked him if he would be so good as to tell A. I wanted him, he went to A. and said, 'Baron, will you please come? The She-Baron is asking for you.' A. and I thought this name for me most delightful and expressive!" Well selected illustrations of Japanese life and statesmen abound throughout the book and add to the charm of the narrative.

ASHLEY, ANNIE. *The Social Policy of Bismarck*. Pp. xi, 95. Price, 75 cents. New York: Longmans, Green and Company, 1912.

This study of the origin of the German insurance movement begins with the meaning and history of state socialism and continues to the place of Bismarck himself in this movement and the development of this legislation. After a brief abstract of the German acts, the whole movement of state insurance is discussed, with especial consideration of the present English insurance law. The study of Bismarck's development and his realization of the value of insurance laws is very interesting. "By making the individual more dependent upon the state, Bismarck believed he could make him more loyal to it" (p. 57). Although this belief may have been one of the reasons for the insurance acts, yet "Opinion in Germany seems strongly on the side of the legislation. . . . Their (the German employers') unanimity in favor of the legislation is remarkable, considering that they belong to the class which we should expect to be most hostile" (p. 90). Bismarck's secondary object seems to have been fully accomplished as "One after another these employers give their opinion that

both the standard of life and the efficiency of the workers have been greatly improved" (p. 90). The analysis of the origin and substance of German insurance legislation and the comparisons of the German and English systems are particularly valuable.

ASHLEY, W. J. *Gold and Prices*. Pp. 32. Price, 50 cents. New York: Longmans, Green and Company, 1912.

Professor Ashley has reprinted in this small pamphlet a series of articles originally written for the *Pall Mall Gazette*. The views advanced are the usual ones of the quantity theorist, the rise of prices since 1896 being attributed to the increased output of gold. While conceding the extremely variable relation between reserves and deposits, he still finds a close connection between the gold supply and the power of the banks to lend. Little attention is given to the commodity side of the price ratio.

BLAKESLEE, G. H. *Japan and Japanese-American Relations*. Pp. xi, 348. Price, \$2.50. New York: G. E. Stechert and Company, 1912.

The series of volumes published as Clark University Addresses has already established itself as an important commentary on current oriental affairs. This year the field of topics covered is wider than usual, though practically all the essays deal with Japanese affairs. More attention is given to the scientific and institutional advance of the country—less to its international relations. Many of the chapters emphasize the underlying forces which work for the co-operation and friendship of the two peoples. Nearly all of the articles have previously appeared in the *Journal of Race Development*.

BOSTWICK, ARTHUR E. *The Different West*. Pp. 184. Price, \$1.00. Chicago: A. C. McClurg and Company, 1913.

The usual effect of emphasizing points of difference rather than those of agreement is to increase sectionalism. Such an effect scarcely will be produced by this little volume. It is a clear, kind and often amusing description of the impressions and observations of a liberal-minded Easterner who has lived several years in the West. While it is written primarily for the "folks back East," in order that they may know and better understand the conditions in the West, it is neither censorious nor apologetic. It explains the differences and the reader feels that they are quite natural. The observations cover a wide range and some explanations will seem "a little queer" to the native of the West, who will probably consider that the author is still viewing the West through his Eastern glasses. It would be equally interesting to view the "Different East" as seen by a transplanted westerner. A wide reading of this volume will serve a good purpose in eliminating many misunderstandings each group has concerning the other.

BRYCE, JAMES. *University and Historical Addresses*. Pp. ix, 433. Price, \$2.25. New York: The Macmillan Company, 1913.

These are selected addresses delivered during the years in which Mr. Bryce was British ambassador to the United States. They cover a wide range

of subjects, from the study of ancient literature to the mission of state universities. The subject matter is presented in the entertaining form familiar to the author's many American readers.

BUREAU OF MUNICIPAL RESEARCH. *Handbook of Municipal Accounting*. Pp. xxx, 318. Price, \$2. New York: D. Appleton and Company, 1913.

This volume, prepared under the direction of William H. Allen, Henry Bruère and Frederick A. Cleveland, presents in a compact yet comprehensive form all the essentials for an adequate system of accounting control over the receipts and expenses, and the assets and liabilities of municipal corporations. It contains all the information necessary to establish the system in a practical manner, all the elements of which have demonstrated their value by actual experience; takes up and considers revenues and expenses, general account balance sheet, appropriation and fund accounts, the capital account balance sheet, sinking fund and trust funds, functional expense and cost accounts, collecting and controlling revenues, controlling and recording expenditures, municipal store keeping, control over the custodianship of movable property, payroll making, time and service reports; information as to how a public officer may use these various reports to the best advantage; and the steps to be taken in reorganizing accounting and business methods, together with the cost of obtaining complete and adequate information as shown by the experience of Montclair, N. J. The work is admirably adapted for consideration by either layman or professional accountant. It describes not only the things that are to be done, to obtain complete and accurate records of municipal accounts, but also shows how this result is to be obtained by a complete and comprehensive system of journal entries and the reports and books to be used.

CLEMONS, HARRY. *Bibliography of Woodrow Wilson, 1875-1910*. Price, 50 cents. Princeton: Library of Princeton University, 1913.

COUDERT, F. R. *Certainty and Justice*. Pp. vii, 319. Price, \$1.50. New York: D. Appleton and Company, 1913.

To every keen observer of the history-making process there is an eternal conflict between the forces which make for social solidarity through appeal to custom, precedent and the established order and those kinetic forces which generate friction, create new adjustments and require new interpretations. The former tend toward conservatism and stability; the latter, toward change and progress.

This process, especially in the domain of law and politics, constitutes the theme of this volume. In law we find the effort to secure "certainty" by appeal to "the code, to judicial decisions and to the constitution." But substantial injustice may result through the application of precedent to conditions which have changed. This, in practical politics, has led to the change of precedent, interpretation and even the constitution itself through judicial decisions. In this way we have secured a degree of compatibility between these forces in such instances as, the reform of the jury system, the control of the trusts, the regulation of the franchise, etc.

The author believes that a high degree of justice and progress is reconcilable with certainty and stability and that human ingenuity is equal to the task.

The book is full of information, is admirably written, and is a keen analysis of present tendencies in the politico-legal field. It is doubtful, however, whether it will be regarded as "sound" by the conservative portion of the legal profession.

FERRER, F. *The Origin and Ideals of the Modern School*. (Translated by Jos. McCabe.) Pp. xiv, 147. Price, \$1.00. New York: G. P. Putnam's Sons, 1913.

The striking martyrdom of Ferrer throws a peculiar halo about anything that he did through his life, and lends, perhaps, too great emphasis to the fragmentary manuscript which was found by his literary executors. Ferrer's concept of the modern school is certainly not modern, and in more than one sense of the word the institution which he aimed to establish was more than a school. According to his own statement (p. 27), "its aim is to convey, without concession to traditional methods, an education based on the natural sciences." Here is the basis for a philosophy, rather than for an educational system. The statement that "rational education is, above all things, a means of defence against errors and ignorance" will cause no protest, even from the most conservative educator; nor will a perusal of the pages of this little book reveal anything which is not to be found in Rousseau, Froebel, Herbart or Spencer.

GILL, C. O. and PINCHOT, GIFFORD. *The Country Church*. Pp. xii, 222. Price, \$1.25. New York: The Macmillan Company, 1913.

The Country Church is a survey of church attendance, church membership and church expenditures in Windsor County, Vt., and Tompkins County, N. Y. The method is original and the findings accurate. Such criticism as one might make falls upon the side of confirming the severity of the story told of church decline. In these two counties there is shown a decline in church attendance of 53 per cent in twenty years. Church membership appears to have increased and church contribution is reported in terms of nominal increase, but measured by the value of the dollar, in a gradual decrease. The writers make no effort to explain the cause of this religious decline. There is no study of social or economic conditions corresponding in thoroughness with the study of church attendance, membership and expenditures. The results are presented in narrative form accompanied with ample statistical tables and graphic charts. The book is a valuable contribution to the present study of rural social conditions.

HASKIN, F. J. *The Immigrant: An Asset and a Liability*. Pp. 251. Price, \$1.25. New York: Fleming H. Revell Company, 1913.

If the importance of a subject may be judged by the volume of literature it creates, then we may safely assume that the immigration problem is the

most significant question before the American people. This book, like numerous others which have appeared recently in the same field, is based chiefly upon the report of the Immigration Commission of 1907. As stated in the preface, this volume is the reproduction of a series of articles previously published in various newspapers throughout the country, and put in book form to fill a demand from readers of the *Haskin letter* in all parts of the Union.

The material is put in popular form and is calculated to produce an enlightened public opinion on the subject. The treatment is neither comprehensive nor adequate for the purpose of a scientific text, but is admirably adopted to the purpose for which it is intended. The conclusions presented in the main are those of the commission and little originality of thought appears.

It is a good book, however, for popular reading and ought to have a wide circulation. It is illustrated with numerous photographs of different racial groups, but lacks an index, and is therefore not usable for reference.

HOPKINS, J. C. *The Canadian Annual Review of Public Affairs for 1912*. Pp. 789. Price, \$3.50. Toronto: The Annual Review Publishing Company, 1913.

JAMES, HERMAN G. *Principles of Prussian Administration*. Pp. xiv, 309. Price, \$2.50. New York: The Macmillan Company, 1913.

We are beginning to realize now more than ever, that government regulation does not mean simply law making, but involves especially the administration of legal principles by a highly skilled public service. Our laws are therefore becoming statements of principle, and the executive is applying the principle. As time goes on, we are also becoming more and more convinced that we must relieve our state administrations from the curse of partisanship and must make them more effective; we must develop an administrative policy; we must secure greater elasticity and adaptability for our laws; we must legislate less in detail and must leave more to the discretion of the executive. Most of the problems which our states are now confronting cannot be solved by a command of the legislature; they must be worked out with the greatest care by technical experts; their relation to other problems must be examined in detail, and there must always be some means of preventing the letter from defeating the spirit of the law. To this end we need a more general study of administration as a science. Prof. Frank Goodnow has done much to stimulate this study, and we are fortunate in having in Dr. James' book an additional stimulus and source of information.

The remarkable efficiency of the Prussian administrative service has long offered a tempting field to the American student. Dr. James' thought is to describe the organization and to explain some of its most important problems, such as the general police power, labor regulation, education, etc. He outlines the chief laws which have been passed since the Stein and Hardenberg reforms; shows the relation of each administrative body and unit to the

others above and below it, explains the main principles of the civil service, and of the law of officers and describes the protection offered to the individual by the administrative courts. The book is not only useful for the general student of political science but it contains also many hints for the solution of problems which we are now facing in our state governments.

KLEIN, JOSEPH J. *Elements of Accounting*. Pp. xiv, 422. Price, \$1.50. New York: D. Appleton and Company, 1913.

This volume is an endeavor to bridge the wide gap that has heretofore existed between elementary books in bookkeeping and advanced works in accounting. It is well known to all teachers of accounting that such a gap has existed, and Dr. Klein's book will go a long way toward meeting a need.

A knowledge of debit and credit is presupposed, although the book commences with a short review of bookkeeping. It then passes on to the relations between bookkeeping and accounting, and with the elements established, takes up such subjects as corporation accounting, balance sheets, depreciation, reserves, statements of profit and loss, etc. Its final chapters treat of cost keeping and auditing and serve as an adequate introduction to those more advanced subjects.

As a text for those who have had a training merely in bookkeeping and as a reference book within its field the volume should prove a valuable addition to the literature on the subject. A noteworthy feature of the book is the list of questions supplementing each chapter, which, together with the practical questions in the appendix, should be of great assistance to the teacher and student.

LEACOCK, S. *Elements of Political Science*. (Revised to 1913.) Pp. ix, 417. Price, \$1.75. Boston: Houghton, Mifflin Company, 1913.

LEE, G. S. *Crowds*. Pp. x, 561. Price \$1.50. New York: Doubleday, Page and Company, 1913.

The character of this volume can be gleaned from its dedication which reads: "Gratefully inscribed to a little mountain, a great meadow, and a woman. To the mountain for the sense of time, to the meadow for the sense of space, and to the woman for the sense of everything." It is not analytical; it is hortatory, not descriptive; in no fundamental sense is it even about crowds.

MACFARLANE, JOHN J. *Manufacturing in Philadelphia, 1683-1912*. Pp. 103. Price, 50 cents. Philadelphia: Commercial Museum, 1912.

This is a brief account of manufacturing in Philadelphia based upon a careful study of the United States census statistics of manufactures for 1909. The author is the librarian and statistician of the Commercial Museum. The book is handsomely illustrated with photographs of some of the leading industrial establishments. The statistical data are well arranged and the historical touches throughout the book bring out the part Philadelphia has played as a pioneer in various kinds of manufactures. The book is an important contribution to this kind of literature.

MARTIN, E. S. *The Unrest of Women*. Pp. 146. Price, \$1. New York: D. Appleton and Company, 1913.

In his *Unrest of Women*, the author seeks to make a careful diagnosis of the present disturbed condition of the feminine mind, analyzing all the symptoms, and passing judgment upon proposed remedies. Concrete illustrations of the dissatisfaction are given in the words of Miss Thomas, Mrs. Belmont, Miss Addams and others. Mr. Martin discriminates sharply between the feminist and the suffragist, not only discounting the importance of equal suffrage, but doubting its efficacy in relieving the situation. The remedy lies, he says, not in sharing the kingdom of man with men, but in winning back to women their own kingdom. This can be accomplished only by men, he believes, through politics and religion.

MATTHEWS, LILLIAN R. *Women in Trade Unions in San Francisco*. Pp. 100. Price, \$1.00. Berkeley: University of California Press, 1913.

MYRICK, H. *Coöperative Finance*. Pp. xxxii, 328. Price, \$2.50. New York: Orange Judd Company, 1913.

A plea for a reorganization of the American monetary and banking system along coöperative lines, with the author's detailed plan for accomplishing it. The book is illustrated by charts, sketches and cartoons.

NYSTROM-HAMILTON, LOUISE. *Ellen Key, Her Life and Her Work*. (Translated by Anna E. B. Fries.) Pp. xvii, 187. Price, \$1.25. New York: G. P. Putnam's Sons, 1913.

Ellen Key is a unique figure. An old woman living among a group of people constitutionally conservative in their attitude, she has braved their scorn and ridicule and announced her theories to a world which has listened, if it has not thoroughly understood and approved. The author makes it very clear that Ellen Key is another illustration of the prophet without honor in her own country. Like Ibsen, she expressed social views in advance of her time, and like Ibsen she has suffered throughout her lifetime from lack of sympathetic understanding. The author makes it very clear, however, that the time has come when even in her unappreciative country Ellen Key, like Ibsen, is regarded as a thinker of no mean power, and as an intellectual leader with whom the future must reckon.

PATTISON, R. P. *Leading Figures in European History*. Pp. vii, 471. Price, \$1.60. New York: The Macmillan Company, 1912.

This book is intended for those busy people who, though interested in a general way in history, have not had the time or opportunity to read a consecutive history of Europe. Its plan is to present the leading features of important epochs by centering the treatment about the personality of the leading figure of that period. The author has shown skill in the selection of his subjects and in the manner in which he has woven into the various biographies an account of the conditions and tendencies of the times. Thus his treatment of Charlemagne, Richard the Fearless, Gregory VII, Philip Augus-

tus, Frederick II, Charles IV, Lorenzo de Medici, Columbus, Luther, Philip II, Gustavus Adolphus, Louis XIV, Frederick the Great, Napoleon, Cavour and Bismarck constitutes a very readable outline of the chief movements of European history. No new or unusual views are set forth, but the author has based his writing on good general histories and comparatively few mis-statements or unwarranted generalizations are observable. The ease and clearness of its style make the book pleasant reading and it ought to appeal strongly to the audience to which it is addressed.

RACINE, SAMUEL F. *Accounting Principles*. Pp. xv, 280. Price \$3. Seattle: Western Institute of Accounting, Commerce and Finance, 1913.

This volume is another endeavor by an accountant to fill the gap which has existed between books on bookkeeping and those on advanced accounting. The author has not been consistent with his purpose, as he has presupposed too great a knowledge on the part of those familiar only with bookkeeping. This has been caused probably by his desire as stated in the preface "not only to cover the field of the C. P. A. examinations, but also to confine the work within one volume." Sufficient explanation has not been given to fundamental principles to produce the best results for the student.

The best treatment is found on such subjects as investments, depreciation, goodwill and reserves and undoubtedly the text will be valuable to more advanced students as a reference book on these subjects. The book also contains a very good collection of C. P. A. questions on the theory of accounts.

ROBERTS, ISAAC. *Looking Forward*. Pp. v, 315. Price \$1. Philadelphia: Roberts and Company, 1913.

This book is written by the author of the book which appeared in 1896 entitled *Wages, Fixing Incomes, and the Free Coinage of Silver*. It is popularly written in conversational style. Its purpose is to make highly popular the arguments for coöperation. It is a valuable work.

ROOT, ELIHU. *Experiments in Government and the Essentials of the Constitution*. Pp. iv, 82. Price, \$1. Princeton: Princeton University Press, 1913.

This work is composed of lectures, known as the Stafford Little Lectures, given at Princeton University in 1913. It is an argument against the initiative, compulsory referendum and popular review of judicial decisions, especially as applied to the national government. The author also defends the principle of constitutional limitations. The subjects are discussed on a very high plane. Probably no more dignified discussion has yet appeared in book form.

VAN ANTWERP, W. C. *The Stock Exchange from Within*. Pp. 459. Price, \$1.50. New York: Doubleday, Page and Company, 1913.

Although this book is not an official defense of the New York Stock Exchange, it states clearly the attitude of the officials and members of that organization. There is no attempt by the author to give a complete presen-

tation of the case against the exchange and relatively little space is given to answering the usual criticisms. There has been no better general defense of the exchange written in recent years.

Writing for the general reader, the author makes no attempt at a technical defense such as was officially presented to the committee in the money trust investigation by counsel for the exchange. The argument is presented throughout in a pleasing, popular manner, and as there is no attempt to present both sides of the case, any reference to omissions would be inappropriate. Among the best chapters in the book is the one describing and comparing the London Stock Exchange with the one in New York.

VAN KLEECK, MARY. *Artificial Flower Makers*. Pp. xix, 261. Price, \$1.50. New York: Survey Associates, Inc., 1913.

With the same picturesque fidelity to facts which made her *Women in the Book-Binding Trade* so effective, Miss Van Kleeck tells the story of the artificial flower makers. Her method of approach is wholly scientific. There is in her work none of the so-called "human element" which has characterized so much recent literature. She is dealing with facts of the Gradgrind variety, and she does not hesitate to recognize their true characteristics. The committee on woman's work, as well as the Russell Sage Foundation, should congratulate themselves on Miss Van Kleeck's achievement.

WINDER, PHYLLIS D. *The Public Feeding of Elementary School Children*. Pp. xi, 84. Price, 75 cents. New York: Longmans, Green and Company, 1913.

Perhaps the most significant thought emphasized in this intensive study is stated as follows: "Defective nutrition stands in the forefront as the most important of all physical defects from which school children suffer. Indisputable though this fact is, there is no subject the elucidation of which is more baffling to the medical inspector, no condition more difficult to estimate accurately with causes more complex and interwoven" (p. 13). The report then calls attention to the fact that scientific medical inspection shows undernutrition to be extensive. Careful social analysis shows that "although poverty and ignorance are the principal sources of malnutrition, actual lack of food is only one of its many immediate causes." If the author can succeed in doing nothing else than convincing the schools that proper training in domestic science will, on present wages, do much to eliminate undernutrition, she will more than have done her duty.

REVIEWS

BLOUNT, JAMES H. *The American Occupation of the Philippines*. Pp. xix, 664. Price \$4. New York: G. P. Putnam's Sons, 1912.

This book is a history of the American occupation of the Philippines and a vigorous indictment of our attitude toward the Filipino people in the matter of their self-government, from our alleged early double dealings with Aguinaldo to the year 1912.

The author spent six years in the Philippines, two (1899-1901) as an officer in the volunteer army, and four (1901-1905) as judge in the District Court. He believes that the Filipino people are essentially one people, that notwithstanding whatever conscious political unity they may have lacked in 1898 they "were welded into absolute oneness as a people by their original struggle for independence against us, and will remain forever so welded by their incurable aspirations for a national life of their own under a republic framed in imitation of ours." The Filipinos are much more capable of self-government, he believes, than are the people of Cuba to whom we gave self-government. The author cites convincing evidence to show that the revolts against the American government from 1902 to 1906 were much more widespread and serious than the authorities were willing to permit to be known in the United States. It is shown that the political situation at home was largely responsible for the suppression of this information, and likewise for the unwillingness of the government to use the United States troops then in the Philippines to promptly quell these insurrections. An insurmountable obstacle in the way of successful colonial government by the United States in a distant country the author finds in home politics.

Judge Blount's program is for the United States to declare at once a definite policy for the Philippines, announcing a date in the near future when it will turn over the government to the Filipinos, providing first, however, for the neutralization of the Islands by treaties with the other great powers.

The book is full of interesting anecdotes and personal experiences. Its political philosophy is that of the period of the Declaration of Independence and the French Revolution. Although the book is well documented, it cannot be called a carefully balanced history. It strongly exemplifies the merits and the defects of "history told by contemporaries." There is much light but unfortunately also much heat. As an example of the latter, the chapter entitled "Non-Christian Worcester" may be cited. Here the author contends that the publicity given in the United States to Commissioner Worcester's ethnological studies of the wild tribes of the Philippines, including an exhibition of some of these peoples at the St. Louis Exposition, has given many Americans the false idea that these wild people are representative Filipinos. Because of the possible bearing of this false belief upon the attainment of their aspirations for self-government, the Filipinos have become embittered against Commissioner Worcester and other Americans concerned. The truth of this contention, however, is far from a justification of the extreme language used throughout this chapter, of which the following is an example. After citing ex-President Taft's statement that he considered Mr. Worcester "the most valuable man we have on the Philippine Commission," Mr. Blount says that he considers him "the direst calamity that has befallen the Filipinos since the American occupation; neither war, pestilence, famine, reconcentration, nor tariff-wrought poverty excepted." Nor does it justify devoting an entire chapter to Commissioner Worcester and ignoring absolutely his most valuable work in connection with public health, forestry, science, and public lands. The bureaus dealing with all of these subjects, among others, come under the Department of the Interior of which he has been head since 1901.

The reviewer, who himself spent several years in the Philippines, does not believe that the Filipino people are welded so closely together as the author contends. It is one thing to be practically a unit in favor of independence as against a foreign invader; and quite another to be capable of self-government after that invader has departed: it is one thing for Aguinaldo to have an efficient military government and quite another for the Filipino people to elect capable and honest men as municipal officials. Of the experience with municipal presidents, municipal treasurers, and with justices of the peace as a test of capacity for self-government, the author tells us too little. Whether or not a self-government so poor as that which would result if the United States would *promptly* withdraw from the Philippines would be better for the Filipinos than the present partial self-government under American tutelage, is a difficult question. Judge Blount answers it emphatically in the affirmative; the reviewer answers it less emphatically in the negative. Both agree that the United States would be better off without the Philippines than with them.

E. W. KEMMERER.

Princeton University.

The Catholic Encyclopedia. Vol. xv. Pp. xv, 800. Price, \$6. New York: The Encyclopedia Press, 1912.

The appearance of this volume brings to a conclusion a work which reflects great credit on its able board of editors and which will do much to enlighten the general body of Catholics as to their own church as well as to inform outsiders of its authoritative teachings and its attitude toward the great questions of the day. The present volume exhibits the same general characteristics as the earlier ones, though it happens to contain fewer articles of fundamental importance. Such subjects, however, as tradition and magistrism, tyrannicide, ultramontaniam, war, antiquity of the world, woman, cannot be neglected by those who desire to understand the position of the church in the thought of the time. Information difficult to obtain elsewhere is to be found under universities, where there is a brief account of the individual Catholic foundations in Canada, Ireland, Spanish America and the United States, and a general account of the institutions in other lands; and in the article on the Vatican, where, after a full description of the buildings and their history and of the various collections therein, is given an account of the great library with details as to the arrangement and number of manuscripts the most accurate yet published and representing the state of these treasures up to December 1, 1911.

The chief value of the Encyclopedia to non-Catholics lies in its accurate presentation of Catholic views, and while the work is not published by the church officially, its authority is guaranteed by the supervision of the proper censors whose imprimatur is found in each volume. That their work has been done conscientiously is seen in two or three of the items found in the errata at the end of the last volume. Here some 25 pages are devoted to the correction of minor errors of the work, such as spelling, dates, omissions in bibliography, etc. But in the first two volumes two places were discovered where

the contributors had not sufficiently guarded against the suspicion of modernism, viz., in the articles on absolution and apologetics. The correction made in the first of these may be quoted as an example of the care with which the whole work has been supervised. Professor Hanna, of St. Bernard's Seminary, Rochester, had allowed himself to say: "But it is one thing to say that the power of absolution was granted to the Church and another to say that a full realization of the grant was in the consciousness of the Church from the beginning." In the errata we are told to substitute for this passage the following: "Though it is clear that this power of absolution was granted to the Church, and therefore known to the Apostles and their successors, the teaching body of the Church, from the very beginning, still it requires careful study to trace the tradition of this grant (the exercise of this power) and its realization in the practice of the faithful back to the first centuries," etc. The scrupulous care for historical accuracy likewise is illustrated in the errata in connection with the article on St. Anthony of Padua. In the story of the saint's important labors for the faith readers of the first volume had been somewhat surprised to find so much emphasis laid on his miracles, particularly the story "of a horse, which, kept fasting for three days, refused the oats placed before him, till he had knelt down and adored the Blessed Sacrament which St. Anthony held in his hands." The historical evidence for this fact was evidently misinterpreted in one respect, for in the errata we are directed "for horse read mule."

A. C. HOWLAND.

University of Pennsylvania.

COPELAND, M. T. *The Cotton Manufacturing Industry of the United States.* Vol. viii. Pp. xii, 415. Price, \$2. Cambridge: Harvard University Press, 1912.

Mr. Copeland's book presents a very complete analysis of the conditions, both manufacturing and commercial, of one of our most important industries. Practically every phase of the cotton manufacturing industry is discussed, and the factors influencing its development are very ably brought out. Although a large part of the discussion is taken up with conditions in the United States the development of the cotton industry in foreign countries is given sufficient attention to make clear the position of the United States as a present and possible future factor in the world's cotton trade. One of the best features of the book is the way in which Mr. Copeland brings out the effect of the scarcity and high cost of labor in the United States on the stimulation of invention and the development of labor-saving machinery, which have made our cotton-manufacturing industry so different in many ways from that of our European rivals. The book also contains the best discussion of the geographical development of our cotton manufacturing industry that I have ever seen. The analysis of the development of the industry in our Southern States and the effect it is having on the industry of the older sections is especially good.

The changes that are taking place in the commercial organization of the industry are pointed out. A comparison of the costs of manufacture and the

labor conditions in this country is made with similar conditions in the great European cotton manufacturing districts. The book impresses one as an impartial and careful study, based on wide research and personal investigation. Studies of this kind, making clear the conditions and progress of our great industries, are of especial value in throwing light on some of the great industrial problems that are confronting us at the present time.

A. G. WHITE.

University of Pennsylvania.

FAIRCHILD, HENRY P. *Immigration*. Pp. xi, Price, \$1.75. New York: The Macmillan Company, 1913.

The purpose of this book is to treat immigration not simply as an American public problem, but as a sociological phenomenon of world-wide significance. The author frankly acknowledges the difficulty of carrying out such a purpose completely, owing both to the enormous mass of data to be collected and digested and to the highly dynamic nature of the subject.

In fact, the subject matter of the book is almost entirely drawn from American sources. It seems to us, however, that without delving too deeply into European material, Professor Fairchild could have made profitable use of a prolific modern literature on migration in the countries where emigration is as much of a public problem as immigration is for us. Italy, for example, has a voluminous output of reports, books and articles which are most suggestive and interesting. We note that the author's bibliography is almost barren of such references. On the other hand the study of American sources is comprehensive and painstaking.

The historical survey of immigration to this country up to 1882 gives some interesting material not generally available. The description of modern conditions covers more familiar ground. In the discussion of the effect of immigration we should be better satisfied if Professor Fairchild would give briefly the facts upon which to base some of his conclusions rather than a string of opinions of "eminent authorities." This leads to the suspicion that the "imposing weight of authoritative opinion" which he adduces, is called upon to eke out gaps in the data.

As to practical policy the author advocates a radical restriction of immigration until such time as some form of international regulation can be adopted, based upon sound social principles, and taking all interests into consideration. His general conclusion is that immigration as at present conducted, while not an unmixed evil to any of the parties concerned, involves many serious disadvantages to this country, to the countries of origin and to the immigrant himself.

KATE HOLLADAY CLAGHORN.

New York School of Philanthropy.

FULLER, SIR BAMPFYLDE. *The Empire of India*. Pp. x, 394. Price \$3.00. Boston: Little, Brown and Company, 1913.

This is the best of the volumes appearing on this interesting series describing the British colonies. In interest, of course, India to the average reader

overtops the other possessions because its population is one-fifth of the world, its civilization is ancient, its social, political and economic problems complex. The chapters of this book reveal long experience in Indian affairs, and the author shows that he possesses to a remarkable degree not only the ability to see the virtues but also the shortcomings of English rule. His interpretation of the native viewpoint is sympathetic without being propagandist. The most interesting chapters, however, are not those which deal with local politics and imperial relations but with the economic conditions of the country and the social and religious life of the people.

The introductory discussion portrays the physical regions of the sub-continent and its natural history. Next are discussed agriculture, the increase of population made possible by England's abolition of incessant petty war and the consequent aggravation of the famine danger. The extent to which the government has relieved the dependency on the natural rainfall by irrigation, railways and industrial developments is outlined. Next the peculiar complications of social life are given attention, especially the tendencies toward the disintegration of caste, religious and race distinctions. In the section on government an unusually interesting chapter deals with the native states and their relations to the central government. Special emphasis is placed upon what has been accomplished through the law courts and the technical activity of the government. The closing chapter on political conditions is an interesting estimate of what India would be without England. The author declares that those who wish the entire withdrawal of English control are a small minority. The great majority of those who are sufficiently educated to have a reasoned opinion believe that such a move would not mean a free India, for other countries would replace English domination in a form even less acceptable and that even if not interfered with from without, freedom from England would mean only a return of constant internecine strife.

Though a volume of this size cannot give more than a sketch of the most highly valued possession of the English crown, this is one of the best books which have recently discussed its problems. The author speaks from first hand knowledge and his sense of perspective is excellent. The book has a good map and striking illustrations.

CHESTER LLOYD JONES.

University of Wisconsin.

GIBBON, I. G. *Medical Benefit in Germany and Denmark.* Pp. xv, 396. Price, 6 shillings. London: P. S. King and Son, 1912.

Sickness insurance, although one of the earliest forms of workmen's insurance, is at the same time the most difficult to administer; for no other form of insurance is it so difficult to secure an adequate actuarial basis; no other form of insurance deals with so large a number of conditions, contingencies and circumstances, and no other branch of insurance is so liable to abuse. Feigning of sickness, malingering and valetudinarianism are grave obstacles to the successful administration of sickness insurance. The matter of the provision of sickness benefit in kind and of freedom in choosing a physician are other stumbling blocks to smooth an efficient administration.

Dr. Gibbon's monograph is an intensive study in the field of medical benefit. It does not deal with history or political philosophy but it is devoted to an analysis of the existing systems of sickness insurance administration with a view of bringing order out of chaos, of laying down certain guiding principles which should replace the existing "rule of thumb" methods. He has chosen Germany and Denmark for his field of study because of the wide extension of sickness insurance in these two countries, and because of the contrast they afford—insurance in one being compulsory and in the other voluntary. On the basis of this study he formulates a series of interesting deductions varying in importance and value. The most interesting of the conclusions are: (1) That medical service should be provided mainly in kind; (2) that in sickness insurance free choice of doctor should be conceded; (3) that there are considerable advantages in making the insured pay for part of the cost of medical service out of his private resources; (4) that the provision of institutional benefit is essential for adequate medical treatment; (5) that systematic provision should be made for educating the insured public as to medical treatment in matters of health; (6) that provision of an adequate system of home nursing is desirable; and (7) that societies should be allowed liberal discretion as to the manner in which medical and surgical requirements shall be provided. There is a great number of other conclusions, which cannot be mentioned in this short review. The author arrives at his conclusions dispassionately and impersonally after having carefully looked at the problem from various points of view. In one or two instances he slightly deviates from his rule to show his attitude toward socialistic schemes and methods. Discussing the curious situation of the most obstinate opposition of societies to the free choice of doctors when "the ordinary man does not wish to have his doctor nominated for him," he is willing, among other reasons, to ascribe it to the fact that the managers are socialists and in close touch with avowedly social democratic organizations, and then again he shows it in his refutation of the arguments for a unified medical service.

The book suffers from many repetitions but is a valuable contribution to the literature on the subject.

E. H. LEWINSKI-CORWIN.

New York Academy of Medicine.

HEISLER, R. C. *Federal Incorporation*. Pp. viii, 231. Price \$3.50 Boston: The Boston Book Company, 1913.

The general discussion of federal incorporation, both in the messages of our Presidents and elsewhere, has attracted attention to the legal and constitutional questions involved. Mr. Heisler has presented these questions admirably and succinctly and to the more important of them his book also offers a brief statement of the probable answer. The style is clear and readable; the latest cases have been carefully read, and their bearing on the main question is well brought out. Some idea of the practical nature of the treatment may be had from the following examples of the questions discussed.

If Congress has the authority to charter railway companies, which carry trade from state to state, has it also the right to incorporate a trading com-

pany, which will buy and sell between states? The author finds that this power undoubtedly resides in Congress, since, in the words of Chief-Justice Marshall: "Let the end be legitimate, let it be within the scope of the Constitution, and all means which are appropriate, which are plainly adapted to that end, which are not prohibited, but consist with the letter and spirit of the Constitution, are constitutional."

But can Congress also charter companies to engage in interstate commerce, and allow these companies the privileges of intra-state trade? Here again the author answers affirmatively. In so far as local state trade is necessary in order to carry on the general business of the company, it would have the desired privilege, following the decision in *Osborn vs. the Bank*. Necessarily this local business would be subject to the control of the state in which it was situated.

Could Congress also confer the right to produce or manufacture? Here the author disagrees with Mr. Garfield, whose well-known report, as commissioner of corporations, contended for the power. Mr. Heisler finds that the sharp distinction which our supreme court has made in *Kidd vs. Pearson* and *U. S. vs. E. C. Knight*, between manufactures and commerce, would utterly preclude the possibility of a federal charter with manufacturing power. But there is no constitutional objection to a federal corporation engaging in manufacturing if the states allow it to do so. On this point the author's view is less convincing.

In addition to these interesting problems, the author takes up the question of state powers over interstate companies chartered by the federal government, and the jurisdiction of the federal courts over suits involving federal corporations. The work is well balanced and should prove of value to the general student as well as the legal practitioner.

JAMES T. YOUNG.

University of Pennsylvania.

HIGGINS, A. PEARCE. *War and the Private Citizen*. Pp. xvi, 209. Price, 5 shillings. London: P. S. King and Son, 1912.

This is another of those admirable English books clearly written for the general reader, yet full of instruction for all students of international law and naval warfare.

The results of the discussion of the introductory chapter are well given in the following words (pp. 64-65): "But when all these ameliorations are taken into consideration it remains evident that both in naval and land warfare the private citizen is still subject to great dangers and losses. Forced labor may be requisitioned, private property of every description can be commandeered for the use of the invading army, foodstuffs of all sorts compulsorily purchased, and several of the most powerful military states still insist on retaining the right—one of the most objectionable of the usages of war—of forcing non-combatant individuals to act as guides to the army of invasion."

Passing to a consideration of some of the more important of the disputed points in naval warfare, Dr. Higgins discusses the liability to seizure of hospital ships for the carriage of passengers and crews of destroyed prizes.

In the Russo-Japanese war this was one of the grounds for condemning the *Aryol*. This question is closely related to that of the destruction of prizes and the provision to be made for passengers and crew. It is natural to find a British authority denying to hospital ships the right to take over passengers and crews, for Great Britain can easily discharge those on her ships at one of her ports. Other navies without such facilities may find the sinking of prizes very embarrassing. It is hardly probable that the other nations will allow Great Britain's peculiarly advantageous position to interfere with a humanitarian solution.

As regards the treatment to be accorded ships chartered by newspaper correspondents, the conclusion is reached (p. 107) that the "exclusion of newspaper steamers from a given zone of sea or their admission under strict belligerent censorship is to be preferred" to any other solution.

The conversion of merchant ships into war ships is regarded as "part of a wider topic, namely the legitimate combatants in the prosecution of war at sea," and the definition of privateering is closely examined. As the author states (p. 159) "the failure to reach agreement [at the London conference] on the subject of the place of conversion of merchantships was caused by the refusal of states to accept a compromise on a question of policy which they believed themselves able to carry out in case they were belligerents, and which they considered of too great value to permit of compromise." The situation is pregnant with danger, for where the conversion is not recognized as legal, Great Britain scarcely veils her threat to treat the crew under certain circumstances as pirates. "If," concludes the author (p. 165), "the official and professional combatants are to treat non-combatant persons with leniency, and carry out the principle of sparing unarmed enemy subjects in person, property and honor as much as the exigencies of war allow, there must be no hazy line of demarcation between combatant and non-combatant."

A discussion of neutrals and closed trade brings this remarkable little book to a close. To follow the very able and fair-minded presentation, logic would seem to favor subjecting a neutral engaged in this trade to seizure for unneutral service, but before we suffer ourselves to be convinced, we must dig still deeper and consider the question from every aspect. Does it seem reasonable that two nations, because they have different régimes as to coasting and colonial trade in time of peace, should find themselves upon a different and unequal footing when it comes to a death struggle between them? Is it sufficient to reply that this eventuality could and should have been foreseen? When a state no longer has control of a port in the hands of insurgents, it cannot close the port to foreign trade by proclamation, but must rely upon a *de facto* blockade. Why then, when it may have lost *de facto* control of trade between its outlying possessions, should a regulation made for a condition of peace put it at a disadvantage with a combatant who has made no such regulation? Are not blockades and the other recognized restrictions of trade with the belligerent sufficient? Powerful neutrals are likely to find some means to secure a lucrative coasting and colonial trade held open to them. The restrictions on coasting and colonial trade are always regarded with jealousy by other nations and would be soon removed if the enforcing

nations should lose the strength to maintain them. When war breaks out, they would be continued if possible, but when the circumstances of the conflict render this impossible, neutral nations regain commerce previously withheld. True, the cession may be by decree as though freely granted, but in point of fact it is a pill the harassed belligerent has to swallow.

ELLERY C. STOWELL.

Columbia University.

HOBSON, JOHN A. *Gold, Prices and Wages*. Pp. xiii, 181. Price, \$1.25. New York: George H. Doran Company, 1913.

With the exception of Professor Fisher's *The Purchasing Power of Money* there have been few important contributions to the theory of money for several years. Mr. Hobson has, however, presented in this volume a vigorous and stimulating explanation of the relation between money and prices. Instead of the usual elaboration of the quantity theory, a new explanation is advanced and the traditional view is vigorously attacked.

The author takes direct issue with the quantity theorists. If their explanation is anything more than the mere truism that "a price expresses the ratio between the quantity of money paid for goods and the quantity of goods sold," it is incorrect. "The normal direct source of money at any time is payments for goods," and "the supply of money, the aggregate of purchasing power expended upon the supply of goods during any given year," consists of (1) the gross receipts from the payments or purchases made during the year, (2) the additional gold or notes issued as currency during the year, and (3) the additional credit issued as loans, discounts or other advances by banks.

An acceleration in the supply that comes as income from the sale of goods cannot be attended by a rise in prices, because it implies an increase in the quantity of goods equivalent to the increase of money. Hence the rise of prices during recent years is to be explained by an increase of gold or of credit.

Both have contributed, but the increased output of gold is relatively small and would at the most influence prices less than one-tenth per cent per annum. The increase in credit, however, has been very great and has been due to an enlarged demand for capital to be used for development purposes. This demand has raised the rate of discount charged by the banks and has caused them to scramble for the new supplies of gold. This is the converse of the usual explanation that increased supplies of gold have increased the lending power of the banks and explains the rising rate of discount as the current view does not. In other words, "the supply of gold has been inadequate to keep down the price of money." The growth in bank credit has been made possible by the great increase of collateral in the form of stocks and bonds.

This vast increase in the supply of money has been accompanied by a retardation (not an actual decrease) in the supply of consumption goods. An increasing proportion of money is expended upon fixed investments, luxuries, wasteful processes of competition, etc. The investments in capital goods may ultimately be so productive that the increased supply of goods will lower their prices but temporarily labor and capital are withdrawn from the field of consumption goods and hence their production is retarded.

Much of this is not inconsistent with a quantity theory of money. The difference between the two views is found in the author's insistence that a high discount rate during a period of rising prices is not to be explained by the quantity theory and in his contention that the velocity of circulation of money and the volume of credit bear no determinable relation to the supply of gold. Moreover, there is a growing tendency to ignore the intrinsic value of gold, which is becoming a form of token money. Except in financial crises, money has no purchase-price. It is "owned" only by governments, banks and other financial firms and is "let out" by them to individuals at a "hire price" which is collected as brassage, or through taxation by the governments and as discount by the banks.

The argument throughout the book is largely *a priori* and perhaps necessarily so in the absence of reliable statistics. In the few instances where concrete proof is introduced, it is not convincing. In spite of this weakness, the author has presented the strongest attack on the quantity theory that has as yet appeared, and explains more satisfactorily than has anyone else the relation between rising prices and a high interest rate.

E. M. PATTERSON.

University of Pennsylvania.

HOWE, FREDERIC C. *European Cities at Work*. Pp. xiv, 370. Price, \$1.75. New York: Charles Scribner's Sons, 1913.

This book happily treats the newer functions that the German and British cities are assuming. It is readable, yet well supported; accurate, yet the author has been able to get above his details. He discusses the housing undertakings; socialization of transit in British and in German cities, municipal markets, state-owned railways, municipal theatres and pawn-shops, bakeries, saving banks, sewage disposal, real estate ventures, city plans, civic centers, workingmen's cottages, municipal slaughter houses, school expenditures, manual training, city debts; the limitation of uses to which urban land can be put, the waterfronts of German cities, recreation centers, the parcel posts in Germany and Great Britain; municipal sanatoria, municipal loans to workmen, the budget of the German city, business taxes, elevated railways, taxation of land values, unearned increment taxes, legal aid departments, license taxes, unemployment insurance, waterway improvements, water communications, workingmen's tickets, and in general all that the German and the British cities are doing to further sane community life and to further the well-rounded development of the urban citizen.

Of special interest are the descriptions of the way the German cities determine the uses to which land can be put by the owners. Factories are required to locate upon the railway or harbor and on the side of the city away from the prevailing winds. Terminals and railway bridges are built with switches, sidings and spurs, which are linked up with the canals and waterways to ensure the economical handling of freight. The territory near the factory district is dedicated to workingmen's homes. The streets are planned with this object in view, and neighborhood parks, playgrounds, and public baths are usually provided. Through the zone system the direction and character of future city

expansion are controlled. The council divides the city into districts in which the building regulations are fixed in advance of local development, limiting the amount of land that may be covered by buildings, the height of the structures that are to be erected, the distance that dwellings must be located back from the streets and the space that must be left between buildings. To further their control many cities own a large percentage of urban real estate. Thus Frankfurt owns 48.9 per cent of the land within its limits; Ulm owns 80 per cent; Mannheim, 35.4 per cent and Hanover, 37.7 per cent. Berlin, including the area owned outside of its boundaries, owns land to the extent of 240.8 per cent of its total area.

It is such facts as the foregoing that characterize this suggestive discussion of the newer social, economic and political activities of European cities.

CLYDE L. KING.

University of Pennsylvania.

KEITH, ARTHUR B. *Responsible Government in the Dominions*. 3 vols. Pp. lxxiv, 1670. Price, \$12.75. New York: Oxford University Press, 1912.

The publication, within two years of the second edition of Moore's *Commonwealth of Australia*, Ashley's *British Dominions* and Keith's *Responsible Government in the Dominions* combined with the announcement of the early appearance of the revised edition of Lefroy's *Legislative Power in Canada* indicates a growing interest in the study of the institutions of the self-governing colonies of the British empire. Confining the survey of comparative government to the classic group, England, France, Germany and the United States—to the utter neglect of such rich fields of investigation and comparison as those afforded by the English colonies and the Latin American states—can no longer commend itself to students of this branch of political science. In many respects the parliamentary system of government is undergoing its most interesting modifications in the self-governing colonies and to Americans these changes have a peculiar significance. Such experiments as the one in Australia where an effort is being made to engraft the American doctrine of judicial supremacy upon the parliamentary system as a basis are being carefully scrutinized by friends and critics of the American government.

In view of the great interest in the government of the colonies the publication of this comprehensive and authoritative work dealing with the federal systems of Canada, Australia and South Africa, comes as a most welcome addition to the literature of comparative government. As a continuation and development of the ground covered in *Parliamentary Government in the Colonies* by Todd, this work will no doubt take a high rank.

The author discusses fully the origin and history of systems of self-government in Canada, Australia, New Zealand and South Africa. Under the title executive government, the powers and position of the governor and the cabinet system in the colonies are analyzed. Parliaments of the dominions are treated from the point of view of (1) powers and limitations; (2) organization of houses; (3) privileges and procedure; (4) constitutional relations. The federal systems of Canada, Australia and South Africa are then taken up in turn and the various relations of the dominions and provinces are thoroughly

described. Imperial control over legislation and administration receives careful consideration, and final chapters are devoted to the judiciary and church in the Dominions and to imperial unity and coöperation.

Eminently fitted by his thorough training and wide familiarity with colonial institutions the author has undertaken to describe the legal basis and practical working of the institutions of the English colonies. For a painstaking analysis of the steps in the development of self-government in each of the colonies he has placed all students of English colonial institutions under deep obligation. The portions dealing with the growth of the ideas and principles of colonial self-government are particularly exhaustive. In fact the very thoroughness and completeness with which the subject has been treated will render the work difficult to use for those who are students and not officials or experts in colonial government.

From the standpoint of the student of politics the author has used documentary material too freely. Frequently long letters, papers or dispatches are given in full when only small portions bear directly on the point under discussion. The work would have proved much more readable and for many purposes more useful if the author had chosen to condense these official papers. Certain portions of the volumes suffer particularly in this respect. In discussing the powers and prerogative of the governor (pp. 105-114 and pp. 193-239); the rule for disallowance of colonial legislation (pp. 1042-1047); and in the treatment of trade relations and the currency (pp. 1160-1187), as well as in other instances official documents are used to such an extent that the volumes take on the form of a source book rather than a systematic treatise.

While this plan of treatment has no doubt distinct advantages for the host of colonial officials and experts who will find invaluable aid in the publication of lengthy papers it renders the volumes too large and the style too cumbersome for others than specialists in colonial administration.

The effort to treat the peculiarities of each of the self-governing colonies with regard to matters of even minor detail renders the discussion in many places confusing and emphasizes the complexity and vagueness which at times appears to enshroud responsible government. This difficulty perhaps is unavoidable, but it raises the question whether a volume dealing with each of the colonies is not more practicable and effective than an attempt to treat all in one work.

The imperialistic sympathies of the author at times tend to color his criticism of colonial institutions or politics. These sympathies are apparent in such comments as that with regard to the attitude of the Australian high court in its attempt to apply the American doctrine of implied prohibitions so as to render immune from taxation the instrumentalities of state and federal government. If one may judge from the continuance of the high court in its position and the confident assurance of Australian commentators that the right course has been chosen the attitude of the court is not so far wrong as one might be led to assume (pp. 833-834).

The volumes contain a wealth of material not otherwise accessible and they render possible a careful and accurate survey of the political systems of each of the self-governing colonies. When parliamentary government in

the colonies receives the attention which it well deserves on the part of students of political science this work will render invaluable aid in the comparative study of governmental institutions.

CHARLES G. HAINES.

Whitman College.

KOESTER, FRANK. *The Price of Inefficiency*. Pp. xxiv, 439. Price, \$2. New York: Sturgis and Walton Company, 1913.

In this book the author treats a large number of subjects which range from the wastes of our political system, the waste of human life, the waste of monopoly, etc., which are properly included under the above title, to various topics which afford the opportunity of a discussion favorable to socialism, and finally to many matters treated for the most part by an unfavorable criticism of American affairs in general. American divorces, pancakes, and laws for the sterilization of certain criminals, illustrate the range of American institutions that are severely condemned.

The book contains many evidences of having been put together in haste, e.g. on p. 41, "It may best be indicated by a quotation for the author's work," on p. 173, "neither using the invention itself or allowing anyone else to do so," on p. 222, "neither by the politicians or capitalists," on p. 37, quoted matter, "The production for 1907 included 395,000,000 tons of bituminous and 85,000,000 tons of anthracite coal. . . . The available and easily accessible supplies of coal in the United States aggregate approximately 1,400,000,000 tons. At the present increasing rate of consumption, this supply will be so depleted as to approach exhaustion before the middle of the next century." It most certainly would in less than four years.

The unbounded praise of things German reminds one of the praise given them by Tacitus and is doubtless included for a like reason.

Those portions of the book which deal with specific wastes and in which an attempt is made to state their pecuniary measurement furnish a comprehensive survey of matters which are remediable. These are based on facts which all know, and in general are estimated on the opinions of those best qualified to make approximate estimates. These wastes are enormous and their extent is well stated by the author.

On the whole the book is at least a fair one and includes some good chapters. A more accurate title for it would be "A German American's Criticism of American Institutions" than its timely title of *The Price of Inefficiency*.

MAYNE S. HOWARD.

New York City.

LE BON, GUSTAVE. *The Psychology of Revolution*. Pp. 337. Price, \$2.50. New York: G. P. Putnam's Sons, 1913.

Since the author published his *Psychologie des foules* in 1895, there has been an ever increasing interest in the interpretation of crowd conduct. In the present volume the author attempts an interpretation of the general phenomenon of revolutions on a purely psychological basis. Both at the beginning and at the end of the volume general principles are discussed, but

the interpretation of the French revolution is the central theme. It is only by supplementing rational logic, which generally has been falsely regarded as voluntary and rational, with an appreciation of the rôle played by affective, collective and mystic logic that an explanation can be had of the force of "beliefs which no reason could justify." The events of the French revolution illustrate the effects of certain types of mind and of powerful leaders upon group conduct. Prejudice, fear, hate and timidity are most potent factors. Jacobin religion, the mystic mind and irrational beliefs, rather than economic and social forces, determined the trend of events and constituted the real basis of the reign of terror.

To those who have a profound regard for the process of social causation, this book will seem as one-sided in its interpretation as a thoroughgoing determinism does to the author. That he has rendered a valuable service in emphasizing the psychological element, none will deny; but he has given scant consideration to the social and economic causes underlying the production of the types of mind so powerful in shaping the events of the revolution. Considered as one aspect of interpretation without which no adequate explanation can be had, the book is extremely valuable. It will arrest attention, and provoke discussion. No student of the French revolution can afford to neglect it.

J. P. LICHTENBERGER.

University of Pennsylvania.

MOORE, BLAINE F. *The Supreme Court and Unconstitutional Legislation.*

Pp. 158. Price, \$1. New York: Longmans, Green and Company, 1913.

It is the view of Dr. Moore that criticism of the courts has reached an acute stage. Through the power to declare laws unconstitutional they have negatived reformatory measures of both legislative and executive branches of state and national governments. Men alive to the social and economic needs of the time therefore demand a limitation upon this assumed power. The author attempts a systematic study of just what the United States Supreme Court has accomplished by the exercise of judicial control, limiting himself, however, to court decisions as his source material.

The introductory chapter describes the various cases in state courts from the beginning of the revolution to the year 1803 which afforded precedents to the United States Supreme Court when in *Marbury vs. Madison* it definitely asserted and exercised the power to declare laws of Congress null and void. When the convention of 1787 finished its labors there had been but two cases in which state courts avowedly exercised this power in reference to their coördinate legislative bodies, but by the year 1803 the doctrine had been asserted more or less definitely in about fifteen cases in eight, possibly nine, of the original thirteen states. The judges were not so much influenced by actual decisions in other states as by the quickly formed consensus of opinion among them that judicial review was the inevitable consequence of the adoption of written constitutions. Yet there were eminent jurists among them who refused assent to the doctrine, and there was hot opposition outside the court room.

In the second chapter the attitude of the Supreme Court to judicial review is considered. It is shown that several of the Supreme Court justices when upon circuit duty not only asserted but exercised the power to declare both state and federal laws unconstitutional before the year 1803. Indeed there was one unreported case, soon forgotten, *United States vs. Todd*, decided in 1792, in which the Supreme Court itself exercised this power. The question really was settled by the action of the court in 1803 and by the acquiescence, however reluctant, of the other departments in subsequent years. Dr. Moore would have depicted the uncertainty of the situation before 1803 more clearly if he had quoted the statements of Justice Chase, extreme Federalist though he was, made in 1796, 1798 and again in 1800, to the effect that it was an undecided question where the power lay to declare laws unconstitutional, yet in the last named year Chase expressed his willingness to yield to the general sentiment.

Dr. Moore makes too much, it may be thought, of the mere presence or absence of expressions of regret when the court throws out legislation, either state or national. Nevertheless, taking these expressions in the large, it is evident that in the early years the court was awed by the independence and dignity of the sovereign states, and was bolder in its treatment of Congress than of the legislatures. Yet the time came when the state law-makers were lectured as if they were incorrigible children.

In the third chapter the author classifies and analyzes the thirty-three decisions of the court by which laws of Congress have been declared void. The court in one class of decisions has endeavored to maintain the balance of power between the three branches of the federal government, yet not vetoing the modern tendency to give administrative bureaus quasi-judicial authority. The court in another class has resolutely stood against federal encroachment upon state power, but at the same time it has vastly increased its own power by its interpretation of the fourteenth amendment, and it has hampered Congress in the attempted solution of social and economic problems. In a third class of decisions the court has aimed to protect private rights from encroachment by the public. Here the author thinks that the court has not subjected itself to criticism except in the *Adair* case where a law in the interest of organized labor was thrown out. When the court has attempted to solve fundamental political and social problems, as it has done in a fourth class of cases, it has failed in every important attempt. It must fail when it bases its decisions on the individualistic theories of the dead past and not upon the aroused conscience of the living present. Dr. Moore is doubtful of any solution of the problem of judicial control unless the Supreme Court itself voluntarily becomes liberal and tolerant enough to allow the national and state legislatures sufficient discretion to properly deal with the questions of our time.

The above conclusion, however, is based really more upon the control of the federal Supreme Court over state legislation than upon its control over national. The work of Dr. Moore is therefore incomplete in that he has not given us in another chapter a similar analytic treatment of the more important cases among the two hundred and forty-six in which state constitutions,

statutes and ordinances have been declared unconstitutional. Yet he has in a measure atoned for this omission by the carefully prepared tables which appear in the appendix.

CHARLES H. MAXSON.

University of Pennsylvania.

PARMELEE, M. *The Science of Human Behavior*. Pp. xvii, 443. Price \$2. New York: The Macmillan Company, 1913.

That sociological science in its development follows the same course as that in other sciences is again strikingly exemplified in the results of inductive research presented in this volume. The method employed is scientific and will meet with little criticism. Whether or not the author has interpreted rightly and synthesized correctly the positive results of modern biological and psychological knowledge remains for specialists in these fields to determine. It is always a hazardous undertaking to attempt to cover such a wide field of knowledge. Even if minute errors should be found, it will scarcely, we believe, diminish the value of the work.

He has traced with painstaking care the evolution of behavior in living organisms through tropisms, reflex actions, instincts and intelligence up to self-consciousness and collective behavior in man. Terms are defined with unusual clearness and though they may not be finally accepted by all, there is no uncertainty in the ideas presented. Perhaps the best example of this perspicuity is found in his discussion of the confused subject of instincts. Some will no doubt be dissatisfied with his definition: "An instinct is an inherited combination of reflexes which have been integrated by the central nervous system so as to cause an external activity of the organism which usually characterizes a whole species and is usually adaptive," but it has the merit, at least, of being perfectly definite and certainly will prove valuable in further study and discussion.

Again in his treatment of the causes of collective behavior, which is the real pursuit of the work, he has shown conclusively that function cannot be separated from structure in any adequate treatment and that no single socializing factor can be found sufficient to account for the social process. Collective behavior is not a distinct and separate type but is functionally and organically a part of a process which has its roots in the structure of the associating individuals and is conditioned by the environment. This idea, of course is as old as Spencer, but the author has given a new version of the unity of the whole process and given it a clearness not always perceived.

For those who have regarded sociology as an emotional or rhetorical subject we most heartily commend the reading of this volume. It will clear the atmosphere. Those who have read it will look forward eagerly for the appearance of the remainder of the series in which the author proposes "to deal with the evolution of human culture and of human nature on the basis furnished by this book."

J. P. LICHTENBERGER.

University of Pennsylvania.

POWELL, G. H. *Coöperation in Agriculture*. Pp. xv, 327. Price, \$1.50. New York: The Macmillan Company, 1913.

The coöperative movement in American agriculture has advanced only far enough to raise the question why it has gone no further, and the doubt whether a development here of coöperation comparable, for example, with coöperation in Denmark is reasonably to be hoped for. There are, in Mr. Powell's enumeration, associations of cattle-breeders, predominantly advisory and educational, grain elevator associations, which have been quite generally successful but thus far not uniting into central organizations; coöperative creameries, whose members are said generally to have no understanding of the fundamental principles of coöperation; cotton-farmers, who maintain coöperatively small neighborhood storage houses, but still lacking "a comprehensive system of credit and a system of marketing and distribution." The best developed organization here described is the California Fruit Growers Exchange, which supervises the work of the orchards and employs sales agents, giving information as to markets and prices, but leaving the individual shipper free as to prices and terms of sale. Our farmers have nowhere shown the capacity for joint action and the tolerance of democratic restraint exhibited in some European countries.

A purpose of coöperation not second in importance is a regulation of the particular industry, possible only by concerted action (forbidding the sale of damaged fruit, for example, preventing methods likely to result in damage to the fruit, etc). No system described in the book before us serves this purpose better than the purchase of eggs at a certain private creamery. The sellers are compelled to sign an agreement which would obviate the characteristic evils of the egg business, much as a coöperative association might lay down rules in the same matter. In that neighborhood the price of eggs has increased, because the quality has improved; the farmers have learned that it is profitable to keep poultry of good stock; even the local grocers are reconciled to losing the trade in eggs because the farmers have now a larger power of purchasing groceries. Though this creamery is private, it is "essentially coöperative," in that its owner and manager is a far-sighted business man, . . . content to take a small profit and to pay as liberally as possible for both cream and eggs.

Such cases as this suggest strikingly the possibility that merely a greater enlightenment on the part of middlemen might perhaps go far toward bringing order into our chaotic trade in agricultural products instead of the coöperative method for which the disposition has thus far seemed generally lacking.

Mr. Powell's discussion of the theoretical basis of coöperation is intelligent, though one must doubt his authority on matters of general economics when he assures us that the formation of labor unions has almost eliminated competition among laborers (p. 3).

A. P. WINSTON.

Pearre, Md.

SCOTT, J. W. R. *A Free Farmer in a Free State*. Pp. xlii, 235. Price, 6 shillings. London: William Hinemann, 1912.

The prosperity of the Dutch farmer is so pronounced that he "has ceased from grumbling, and . . . admits that he is doing very well." He has been driven to the exertion necessary in attaining this happy state, by "the gracious pinch of foreign competition" which impelled him to shift from wheat and buckwheat to butter, cheese, kitchen vegetables, bulbs and flowers. The necessary change in methods of production was accomplished through coöperative associations, which serve the supervisory and regulative purpose of guilds.

"Last year of all the 958 creameries in the country, 680 were coöperative; likewise 201 cheese factories out of 291. Education in agricultural science has aided; nearly every farmer one meets can talk about phosphoric acid and nitrogen. He can tell you the proportion of fat in milk and he sprays his potatoes."

In five years the annual output of butter has increased by 7000 tons. Fifteen years ago The Netherlands sent about 5,700 tons of bulbs in a twelve-month; the export is now thrice that weight. . . . In the course of several visits to Holland, I have never met any one who disputed the fact that in spite of the rise of food throughout Europe, food is still relatively cheap in Holland, and that more of it is eaten, or that wages are higher and people better housed." The percentage of illiteracy among recruits was 12.3 in 1880, but only 1.4 in 1909; the percentage measuring 5½ feet and over was only 28 in 1880, but 46.56 in 1909.

This is an Englishman's description of rural life in The Netherlands: full of praise, for the most part well deserved, though occasionally one may suspect a purpose of making the best possible case—as when the increase in rural population is shown by comparison with a date so far back as 1830: a more recent starting point would have been more significant.

A. P. WINSTON.

Pearre, Md.

SLATER, GILBERT. *The Making of Modern England*. Pp. xi, 308. Price, \$2.50. Boston: Houghton, Mifflin Company, 1913.

HAYES, CARLTON. *British Social Politics*. Pp. xi, 580. Price, \$1.75. Boston: Ginn and Company, 1913.

The appearance of these two books is particularly opportune. We have been watching with interest British experiments to solve social problems by legislation, and already have become imitators. Several states have established wage boards modeled on those of Great Britain rather than those of Australasia. Insurance against unemployment and against sickness is already being discussed. A large percentage of our workmen's compensation laws are modeled on those of Great Britain, and we have avoided, to a great extent, state insurance as developed in Germany.

Professor Slater's volume is a careful and lucid study of the forces—economic, social, political—that have made England what she is today. Special emphasis is laid on the development of the labor movement and of labor

legislation, on the development of tariff ideas and of the tariff and on changes in municipal government. This story of the growth of England from the close of the Napoleonic wars is interesting and is well told. The chapters on labor are probably the best. Professor Slater has summarized a mass of material in a remarkably short space. The book gives a vivid picture of England and of the forces that have been at work. It is unfortunate that there are no bibliography, citations and references, as these would have given the study greater value to the student.

Dr. Hayes takes up the story and in a source book gives us "first hand materials for the study of current social and political problems." Although the book is intended for college and university students, the short introductions to the material on the various subjects give it value for the more mature student and reader. In some cases, the bills under discussion by the members of Parliament who are quoted are given in their entirety, in others the important clauses are included. The subjects treated, workmen's compensation, trade unionism, child welfare, old age pensions, the unemployed, sweated labor, housing, Lloyd George budget, curbing the lands, national insurance, cover the important social legislation of the Liberal administration that came into power in 1905. The attitude of the various parties is shown in the speeches quoted. Dr. Hayes has assembled for us a group of very interesting and valuable documents, not readily accessible.

ALEXANDER FLEISHER.

Philadelphia.

SMITH, G. B. *Social Idealism and the Changing Theology*, Pp. xxiii, 251. Price \$1.25. New York: The Macmillan Company, 1913.

MACFARLAND, C. S. (Ed.) *Christian Unity at Work*. Pp. 291. Price, \$1; and *Report of Proceedings of the Second Quadrennial Council of the Federal Council of the Churches of Christ in America*. Pp. 140 (gratis with order for above book). New York: The Federal Council of Churches, 1913.

These three books are significant of the change that is rapidly taking place in the attitude of the church toward the problems of modern life. They represent both theory and practice. Professor Smith's book contains in substance the lectures delivered before the Yale Divinity School in 1912 on the Nathaniel William Taylor Foundation. It is a plea for the ethical transformation of theology to fit it to make its contribution to the civilization of our age. The author holds that "the movements of life in our day have brought to the front aspects of the social question sadly needing the guidance and control which can be supplied only by an ethical religion. The utterances of theology, in so far as it has followed traditional paths, have been somewhat remote from these pressing moral questions of social justice." Professor Smith believes that "the time has come when the secular forces of reform are crying loudly for the aid which can come only from a religious idealism" and it is to indicate the character this idealism must take that his book has been written. To make clear the latent religious values of those aspects of modern life which are holding the center of the stage today and to give them their proper place in systematic theology is a task of vital importance if the church

is to do its part in the development of the new social order. The book is a distinct contribution to this task. It is written with insight and discrimination. It may be specially commended to those who have come to feel that the church is hopelessly out of touch with the spirit of the age.

Christian Unity at Work is the official report of the addresses delivered at the second quadrennial session of the Federal Council of the Churches of Christ, which took place at Chicago in December, 1912. It gives an interesting record of the matters which engaged the attention of the delegates of the thirty or more religious bodies represented in the council, and is of importance as indicating the trend of religious-social effort and forecasting the future work of the federated religious forces of the nation. This book, together with the *Report of the Proceedings of the Council*, supplementary to it and containing the official minutes of the conference, reports of secretaries, etc., should be of great value not only to the student of "religion in social action" but to all who are interested in the progress of humanity towards the goal of social righteousness.

GAYLORD S. WHITE.

New York.

TODD, A. J. *The Primitive Family as an Educational Agency*. Pp. ix, 251. Price, \$1.75. New York: G. P. Putnam's Sons, 1913.

The purpose of the book, as its title indicates, is inductive study of the primitive family in order to discover its function in education. A great variety of sources such as books of travel, ethnography, history, folklore, etc., are drawn upon for the data of primitive family life. In order to discover the real function of the family, the author has investigated its origin and development, its changing forms, its incidental customs and traditions. He has studied marital, parental and filial relations, ideas of kinship and relationship, the aim, content, methods and organization of primitive education.

After discussing the unstable, intermittent, brittle bond of primitive marriage, he concludes: "Is it not clear, then, that such a slack marriage relation, instead of wholesomely educating the child, must have left him without education, or what is worse, with an education in rebellion, looseness and egotism? In other words, it must have fostered in him qualities and habits which other social agencies were burdened with checking or weeding out."

In chapters dealing with the relations within the family, he points out that primitive parental regard and affection were rather economic, biologic, emotional, self-gratifying, than rational or conducive to the child's own welfare, and the educational function is almost entirely lacking.

A survey of the phenomenon of education in its rudimentary form as exhibited in imitation, drill, harsh discipline, imitation ceremonies, play, dancing, etc., reveals the fact that the "aim, the content, the methods, and the organization of primitive instruction were predominantly public and communal in their nature; and that the family occupied only a subordinate position in education."

His general conclusion is that those who have sought to find in the family

"the type and foundation of all education" have ventured upon a foolish quest.

While many of his generalizations seem to be based upon insufficient data, and numerous conclusions are a bit dogmatic, the work is an exceedingly valuable one among inductive studies in education, especially at a time when foundations are being reexamined.

J. P. LICHTENBERGER.

University of Pennsylvania.

TRIDON, ANDRÉ. *The New Unionism*. Pp. 198. Price, \$1. New York: B. W. Huebsch, 1913.

Whether or not we approve of the methods or philosophy of "The New Unionism" can make but little difference. The new labor movement which believes in unions composed of all workers in a trade, in direct action to accomplish its objects and also in the eventual establishment of "one big union," is among us. Any book which throws light on its aims, methods, or leaders is welcome.

In an exceedingly readable book, Mr. Tridon has given us a picture of this "practice which will enable the workers to assume as the return of their labor the full control of the various industries." He sketches this revolt against snobbish and selfish craft-unionism on the one hand, and slow-moving parliamentary socialism on the other. As to the genesis of the movement, he quotes Frederick Van Eden: "Syndicalism grew out of Socialism as the Reformation grew out of the old Christianity." The defense of direct action lies in the fact that it brings results. It consists of strikes and of sabotage. Continuous, short "irritation strikes" are disconcerting to the employer and have a greater chance for success than the old-fashioned long strike. There are three forms of sabotage:

1. "Active sabotage which consists in the damaging of goods or machinery.
2. Open-mouthed sabotage, beneficial to the ultimate consumer, and which consists in exposing or defeating fraudulent commercial practices.
3. Obstructionism or passive sabotage which consists in carrying out orders literally, regardless of consequences" (p. 43).

The author reviews the present situation in all countries, and it is surprising to note that the movement has spread, within a little over a decade, to almost all civilized countries. The facts as to the history and philosophy of the movement are stated sympathetically, but without prejudice and without sentiment.

ALEXANDER FLEISHER.

Philadelphia.

WARNE, FRANK J. *The Immigrant Invasion*. Pp. 336. Price, \$2.50. New York: Dodd, Mead and Company, 1913.

HOURLWICH, ISAAC A. *Immigration and Labor*. Pp. xvii, 544. Price, \$2.50. New York: G. P. Putnam's Sons, 1912.

No clearer evidence that European immigration presents a most complicated problem to the American social student can be found than the appear-

ance of two books, within a short period of time, both of whose authors are in positions to observe the facts and record their results and yet whose conclusions are at radical extremes in regard to the effects of immigration upon the future of America. Mr. Warne in *The Immigrant Invasion* regards the inflow of immigrants as a danger if not a menace particularly to the American standards of living and conditions of employment. Mr. Hourwich in his volume on *Immigration and Labor* discusses practically every aspect of the objections raised by the restrictionists and by appeal to facts refutes the arguments.

Some contrasts may be of interest to the reader in order to show the different points of view of the two authors.

In corresponding discussions dealing with the foreigner in the mining industry, Mr. Warne argues that the Slav and Italian invasion of the anthracite industry resulted in the migration of the older English-speaking nationalities—they were forced out by the competition of cheaper labor. While the contest was not fought with swords and guns and pistols, it was none the less a battle. The result was a lowering of wages and a reduction in the standards of living.

Mr. Hourwich argues that the change was due to the attraction of the older immigrants to more remunerative fields and to better paid positions in mines and mills and the new immigrant was drawn by the demand of expanding business into the unskilled positions. Changes in wages are due not to the character of the miners but to the organization of the trust for the purpose of controlling the industry. He says, "It may be questioned whether this residue of English-speaking mine workers who are considered less efficient than the southern and eastern Europeans could have succeeded better . . . had there been no immigration from southern and eastern Europe." "The objection to the recent immigrant is accordingly inspired by pure and simple race prejudice."

In the steel industry, Mr. Warne declares that the un-American situation among the employees in Pittsburgh and South Bethlehem, including low wages and the twelve-hour day seven days in the week, "are due very largely to the free importation of large numbers of low wage workers." Again Mr. Hourwich contends that "long hours and Sunday work have not come with the new immigration. Sunday work has been general in blast furnaces in this country from the beginning." "The Amalgamated Association of Iron and Steel Workers, composed largely of the older immigrants, in the days of its power raised no objection to labor on Sunday." This was an organization of skilled workers, however. In reality it has been "the men lower down" (the unskilled workers composed largely of the new immigrants, mostly Slavs) that have resisted these conditions. He quotes Fitch on the strike of 1909: "It has been thought that the Slavs were too sluggish to resist their employers and unable to organize along industrial lines. It was proved in this conflict that neither theory was correct."

In regard to wages and conditions of employment in general, Mr. Warne says: "It is important never to forget that the alien laborer wields the power of effective competition because he comes as a wage earner seeking a job.

He comes, too, as the possessor of a cheaper labor to sell. Into whatever industry he enters, this labor is sold in competition with the American wage earner, who is at a greater cost to produce his labor. It is this economic characteristic that has enabled the immigrant to put into operation in nearly all our great industries economic and social forces similar to those which have worked so much havoc the past thirty years to the employees in the anthracite industry . . . it is a battle on the part of the older immigrant races and the natives to protect their jobs and wages and defend their standards of living." Mr. Hourwich says: "The labor market being normally overstocked, it sounds possible that the immigrant who is accustomed to a lower standard of living at home than the American workman, will be able to underbid and displace his American competitor. If this view were correct, we should find, in the first place, a higher percentage of unemployment among the native than among the foreign born bread-winners. Statistics, however, show that the proportion of unemployment is the same for native and foreign born wage earners. The immigrant has no advantage over the native American in securing or retaining employment. In the next place, we should find more unemployment in those sections of the United States where the immigrants are most numerous. In fact, however, the ratio of unemployment in manufactures is the same in the north Atlantic states, with a large immigrant population, as in the south Atlantic states where the percentage of foreign born is negligible." Unemployment was least during the period of the highest tide of immigration, and the average number of days of employment per wage earner increases as immigration increases and declines as immigration declines.

Both these volumes are instructive and interesting reading and present the subject from different points of view. It is worth while for any student who is interested to hear both sides of the evidence before forming too positive conclusions.

J. P. LICHTENBERGER.

University of Pennsylvania.

WITHERS, H. *Money Changing*. Pp. viii, 183. Price, \$1.75. New York: E. P. Dutton and Company, 1913.

It is to be hoped that some one will soon popularize American finance as Mr. Withers has that of England. His previous works, *The Meaning of Money* and *Stocks and Shares* covered the two most important phases of local finance. This last volume treats of foreign exchange in an equally clear and interesting manner.

It is difficult to indicate strong points when the entire treatment is so excellent, but emphasis should be given to chapter VIII, on bullion and exchange. The author here avoids the common error of viewing gold movements as always determined by the rise or fall of exchange to certain "gold points" and shows that these movements often occur in apparent defiance of all theories. He enumerates the leading reasons for these irregularities, showing that the profit may come from other sources than the exchange itself. Some of these are the advertisement to the importing firm, the stimulating

effect of gold imports on speculative stock markets, and the fact that the gold may be used as a basis for a large extension of credit.

The only error of importance is a failure to understand the readiness with which our various forms of "legal tender" may be converted into gold. Repeated reference is made to the fact that our silver coins and much of our paper money are not direct promises to pay gold, and the conclusion is drawn that "gold can usually be had in America in normal times, though not necessarily or as a matter of unquestioned right."

This ignores the effect of the currency act of 1900, which orders the secretary of the treasury to maintain all forms of money issued or coined by the United States at a parity of value with gold. This can be done and is done only by prompt redemption of all forms of money with gold at the treasury. Any difficulty that may be experienced in the United States is to be attributed to the failure of our banks always to meet their obligations on demand, and not to any difficulty in redemption when one has other forms of money to offer.

E. M. PATTERSON.

University of Pennsylvania.

WOODS, F. A. *The Influence of Monarchs*. Pp. xiii, 422. Price \$2. New York: The Macmillan Company, 1913.

This is a unique book comprising a detailed analysis of the history of individual countries, and a careful summary of the characteristics of their respective monarchs. The attitude of mind in which Professor Woods approaches the subject is clearly shown by this statement (p. viii): "If the differences among the kings of history, whose varying types range all the way from imbecility to genius and from bestiality to heroism, are in their essence caused by qualities contained in, and carried by, the germ-plasm from which they have been engendered; and if these differences among rulers have been of such transcendent importance, then the master key of history is heredity."

The analysis which follows this statement shows a remarkable coincidence between great rulers and great epochs, and also a remarkable coincidence between ineffective rulers and decadent epochs. The facts plainly tally, but does the conclusion that the rulers are personally responsible for the epochs hold true?

The author has taken the notable episodes in history and the notable monarchs, matched them against one another, and found that they conform to a surprising degree. On this basis of fact he has laid the assumption that the monarch was the cause of the epoch. It might be germane to ask whether it necessarily follows that all of the monarchs of potential ability revealed themselves in great historic epochs. A close parallel to this situation is revealed by Odin in his study of genius in France. Odin shows conclusively that the chateaux of France produce a far higher proportion of geniuses than the rest of the country. Query: Was the higher percentage of achievement of the chateaux the result of heredity or opportunity? Odin concludes his careful analysis with the belief that opportunity played a very large part in the result.

Professor Woods assumes that if the curves of notable monarchs and notable epochs match, one must be the cause of the other. He thereby states his conclusion in his premise, and reaches his result before he has even begun to prove his case. No one will question the statement that at certain great historic periods great monarchs have appeared. It is, however, pertinent to ask whether the period caused the monarch or the monarch the period. So far no work on history, including the present work by Professor Woods, has given a conclusive answer.

SCOTT NEARING.

University of Pennsylvania.

INDEX

- Advertising: Butter selling and, 200; direct selling and, 202; efficiency of, 197; egg selling and, 199; functions of, 199; some experiments in, 201.
- ADVERTISING AS AN AID TO DIRECT SELLING. J. Clyde Marquis, 197-202.
- Agricultural departments, of railways, 43.
- production: Adjustment of, to marked demands, 252; financing of farmer and increased, 188; increased population and, 183.
- American Coöperative Journal, the, 209.
- AMERICAN MARKETS, SOME TYPICAL —A SYMPOSIUM. Clyde Lyndon King, 118.
- ANDREWS, FRANK. Car-Lot Markets and How They are Supplied, 1-9.
- Auction: Provision for, in wholesale markets, 106; sale of car-lot shipments by, 3; use of, in Germany, 163; system, in European markets, 106; savings through adoption of, 106.
- Baltimore: Curbstone markets in, 112; inspection in market of, 115; results secured by municipal market in, 116.
- Baltimore markets: 139-152; administration and supervision of, 124, 125; attitude of retail grocers toward, 123; bona fide farmers in, 122; character of, 119; constructive measures in regard to, 126; effect of, on output of outlying farms, 125; effect of, on prices, 125; foodstuffs sold at, 125; increase of licenses in, 121; net profit of, to the city, 121; professional retailers in, 122; regulation as to foods and sanitary conditions in, 122; regulation as to weights and measures in, 122; stall rentals in, 119, 120.
- BALTIMORE'S MARKETS. James F. Thrift and William T. Childs, 119-127.
- Beef: In cold storage, 50; uniformity of prices for, 54.
- Berlin: City-selling agent in, 163; street trade in, 158.
- Boston, municipal markets in, 139-152.
- BRAND, CHARLES J. The Office of Markets of the United States Department of Agriculture, 252-259.
- Breslau, market-hall in, 160.
- British coöperative retail societies, profits of, 236.
- Building and loan association methods, adjustment of, to farmers' needs, 193, 194.
- BURK, ANNIS. The Indianapolis Market, 131.
- Butter: Advertising and sale of, 200; direct selling of, 200; reforms inaugurated in sale of, in New Jersey, 90.
- California Citrus Exchange, market news service of, 259.
- Car-lot: As unit of shipment, 1; concentration of small shipments into, 6.
- markets: Definition of, 1; necessity for reports in, 8.
- CAR-LOT MARKETS AND HOW THEY ARE SUPPLIED. Frank Andrews, 1-9.
- Car-lot shipments: Diversion of, 7, 8; economy of, 69; necessity for, 5; number of, 3.
- Cereals, increased total production of, 183.

- Chain stores: Advantages of, 77; effect of, on consumers, 249; growth of, 79; introduction of, 64; management of, 77; a modification of retail store, 74; retail business and, 76.
- Chicago: Coöperative store in, 224; increase of coöperation in, 226; jobbers in, 61.
- Chicago and Northwestern Railway, refrigerator-car service on, 2.
- CHILDS, WILLIAM T. Baltimore's Markets, 119-127.
- Cincinnati: As a car-lot market, 2; municipal market in, 139-152; results secured by municipal market in, 116.
- Cities: Administration of market policy by, 105; as centers of distribution, 15; expenditures of, for markets, 104; growth of, 102.
- Citrus fruit growers, organization of, 68.
- City distribution: Agencies in, 69, 70; gross profit for, 248.
- planning: As relief for present-day conditions, 242; for lower distribution costs, 246; functions of, 240; purposes of, 241.
- CITY PLANNING AND DISTRIBUTION COSTS. F. Van Z. Lane and John Nolen, 240-246.
- City-selling agents, importance of, 163.
- Cleveland, curbstone market in, 112, 128.
- CLEVELAND, MUNICIPAL MARKETS IN. Charles Kamp, 128-130.
- Cleveland markets: Constructive measures regarding, 130; effect of, on consumers' prices, 129; farmers in, 129; market master in, 129; professional retailers in, 129; profits to the city through, 128; storage plant in, 128; weights and measures in, 128.
- Cold storage: Advantages of, 44; cost of living and, 44; development of, 49, 71; effect of, 46, 54; facilities for, 49; holding of goods in, 65; investigation regarding, 52; length of time commodities are in, 51; list of commodities in, 49, 55; objections to, 45; purpose of, 48; value of commodities in, 49.
- Cologne, market-hall in, 159.
- Columbus, municipal markets in, 139-152.
- Combination family basket: Contents of, 171, 172, 174; possibilities of, 174; price of, 172; results of, 174.
- Commission merchants: Abuses by, 25, 167; attitude of, toward retail markets, 147; definition of, 57; displacement of, by jobber, 60; distance of, from producer, 59; effect of direct shipments upon, 68; in car-lot markets, 2; inspection of accounts of, 68; licensing of, 68.
- Commodities: Decreased value of, in transit, 11; in cold storage, 49, 55; length of time in cold storage, 51.
- Conservation, extent of facilities for, 45.
- Consumers: Modification in wants of, 64; purchasing by, in larger quantities, 257; savings of, due to standardization, 100, 101; use of publicity by, 83.
- CONSUMERS' COÖPERATIVE MOVEMENT IN CHICAGO, THE. W. M. Stickney, 223-228.
- Consumers' coöperative societies: Formation of, 232; wholesale markets and, 108.
- prices: Effect of Cleveland markets upon 129; effect of coöperation upon, 230; effect of grocery business on, 79; effect of Monmouth County Farmers' Exchange upon 213; increase of, 230; lowering of, through motor truck, 28.
- Consumption: In cities, 3; surveys of, in definite localities, 256; withholding of commodities from 52.

- Coöperation: Adaptation of, to farming industry, 255; effects of, 229, 230; future of, 227; in Europe, 255; increase of, in Chicago, 226; principles involved in, 238.
- Coöperative agricultural associations, establishment of, 237.
- buying, and wholesale markets, 108.
- commission warehouse, and cold storage plant, formation of, 234.
- elevator companies, in Iowa, 206.
- grain companies: In various states, 207; number of, in Illinois, 205.
- incorporation laws, extent of, 203.
- COÖPERATIVE LAMB CLUB AS AN AGENCY FOR LOWER MARKETING COSTS, THE. D. H. Doane, 216-222.
- Coöperative marketing: Distribution and, 255, 256; plans for, 221.
- marketing associations, making of carloads by, 7.
- movement, scientific agriculture and 209, 210.
- organizations: Advantages of, 237, 238; effect of, on farm products, 230; national assistance for, 255; study of existing, 257.
- production, British system of, 234.
- societies: In Great Britain, 233, 235; operation of, 229, 233; organization of, 233.
- COÖPERATIVE SOCIETIES, WHAT THEY MAY ACCOMPLISH IN LOWERING FOOD DISTRIBUTION COSTS. E. M. Tousley, 229-239.
- Coöperative stores: Advantages of, 223, 224; 226; drawbacks in method of, 225; on Pacific Coast, 233; a modification of retail store, 74; price cutting and, 225.
- Cost of living: Importance of problem of, 86; municipal markets and, 146; responsibility of retailer for, 84.
- COST OF LIVING, EFFECT OF THE NEW JERSEY DEPARTMENT OF WEIGHTS AND MEASURES ON THE. William L. Waldron, 86-93.
- Cotton marketing conditions, survey of, 253.
- Cox, JAMES M. Improved Public Highways, 35-36.
- Crédit Foncier, method of, 192.
- Crop conditions, reports on, 9.
- failure, result of, upon consumers' prices, 5.
- Crops: Cost of hauling, 20, 21; length of haul of, 21; selection of, 23.
- Curbstone markets: 112, 113; bona fide farmers as space renters in, 112; charges for use of, 112; effect of, on direct buying, 112; in American cities, 112; in Cleveland, 128; in Milwaukee, 133; quantities sold at, in Cleveland, 129; segregation of venders in, 112.
- Denmark, marketing of butter in, 258.
- Des Moines, curbstone market in, 112.
- Direct buying: Effect of curbstone markets upon, 112; trolley terminals and, 114.
- distribution, effect of motor trucks upon, 24.
- marketing, impossibility of, in large cities, 69; possibilities of, 227.
- DIRECT MARKETING, THE MOTOR TRUCK AS AN AGENCY IN. Stanley Albin Phillips, 20-34.
- Direct selling; Advertising and, 202; by producers, 57, 69; problem involved in, 197; success of, 198.
- DIRECT SELLING, ADVERTISING AS AN AID TO. J. Clyde Marquis, 197-202.

- Direct shipments: Effect of, on jobbers and commission men, 68; effect of parcel post upon, 67; future of, 67; improved condition of food-stuffs through, 28; increase in use of, 66; limitations of, 68; shipping facilities and, 67.
- Distribution: Cost of, and city prosperity, 103; expensive system of, 211; large cities as centers of, 15; machinery of, 231; present system of, 78, 213; problem of, 57; solving of problems of, in Philadelphia, 134.
- DISTRIBUTION COSTS, CITY PLANNING AND. F. Van Z. Lane, and John Nolen, 240-246.
- Distribution machinery: Imperfect nature of, 257; need for increased, 57.
- District markets: Decreasing importance of, 158; in Germany, 157.
- DOANE, D. H. The Coöperative Lamb Club as an Agency for Lower Marketing Costs, 216-222.
- Dresden, market-hall in, 159.
- Dubuque: Markets in, 139-152; results secured by markets in, 116.
- Eggs: Advertising and selling of, 199; direct selling of, 199; in cold storage, 50.
- Electric roads, as distribution agencies, 2.
- England, handling of commodities in, 12, 13.
- English Coöperative Wholesale Society: Increase in trade of, 235; profits of, 235, 236.
- Erie Railroad, auction room of, 3.
- Esswein, H. E., on tobacco growing, 186, 187.
- Europe, coöperation in, 255.
- European cities: Inspection of meats in markets of, 115; stall rentals in, 113.
- Exports, decrease in amount of, 103, 183.
- FAMILY BASKET, THE COMBINATION. Harry Sprackland, 171-174.
- FARLEY, JOHN W. A Questionnaire on Markets, 139-152.
- Farm credits: 227; Increased, 184; possibilities of, 191.
- FARM CREDITS, EFFECT OF, ON INCREASING AGRICULTURAL PRODUCTION AND FARM EFFICIENCY. Homer C. Price, 183-190.
- FARM CREDITS THROUGH FARMERS' LOAN ASSOCIATIONS. Isaac Roberts, 191-196.
- Farm income, definition of, 178.
- loans: Interest on, 184; present system of making, 185.
- organization, efficiency of, 182.
- production, increased investments and increased, 190.
- products: Increased value of, 183; standardization of, 232.
- FARM PRODUCTS, WHOLESALE CITY DISTRIBUTION. Frank G. Urner, 69-73.
- Farmers: Accounts of, 175; application of building and loan principle to needs of, 193; as stall renters, in markets, 112, 170, 197; average annual income of, 102; bona fide, in Baltimore markets, 122; capital, receipts, expenses and income of, 177; closer contact of, with producers, 252; encouragement to, as sellers of produce, 111; exemption of, from retailer's tax, 111; higher prices for, 229; in Cleveland markets, 129; in Milwaukee markets, 132; in Rochester market, 137; marketing of produce by, 26; present needs of, 191.
- coöperative associations, agents of, at car-lot markets, 2.
- coöperative elevator company, definition of, 204.
- Grain Dealers Association: In Illinois, 204; letter to members of, 208; of Iowa, the, 206.

- Farmers' income, increase of, 102.
 — loan associations, kinds of stock in, 194.
 — profits, effect of coöperative lamb club upon, 221.
- FARMERS' PROFITS. E. H. Thomson, 175-182.
- First National Conference on Marketing and Farm Credits, the, 227.
- FOOD CONSERVATION, SOME ASPECTS OF, BY REFRIGERATION. Frank A. Horne, 44-47.
- FOOD DISTRIBUTION IN LARGE CITIES, CONSTRUCTIVE PROGRAM FOR REDUCTION OF COST OF. Thomas J. Libbin, 247-251.
- Food supply: Changes in sources of, 14; department of, in New York City, 250; sources of, for large centers, 4, 5.
- Foodstuffs: Cost of transportation of, 26; elimination of loss through deterioration, 27; improvements in condition of, 32; unnecessary handling of, 26, 27.
- Forwarding agents, duties of, 6, 7.
- Frankfort-on-the-Main, market-hall in, 161.
- Freight rates: By water, 4; car-lot shipments and, 6; development of system of, 10; on individual shipments, 13; sale of produce at, 2; some typical, 13; system of differential, 67.
 — service, provision of, 7.
- Fruit containers, standardization of, 97.
- Fruits, lengthened season for perishable, 5.
- FULLER, MARTHA J. Publicity as a Preventive of Abuses by the Retailer, 83-85.
- FULLERTON, H. B. The long Island Home Hamper, 166-170.
- Germany: Auction method in, 163; importance of storage rooms in, 165; legal regulation of markets in, 154; market-halls in, 155; open markets in, 155; producers as sellers in, 155.
- GERMANY, WHOLESALE TERMINAL MARKETS IN, AND THEIR EFFECT ON FOOD COSTS AND CONSERVATION. Stadtrat D. Levin, 153-165.
- Grades, necessity of, 253.
- Grain, lowering of standards in, 254.
- Grain growers: Coöperation of, 203; profits of, 207; reduction of distribution costs by, 203.
- GRAIN GROWERS REDUCE COST OF DISTRIBUTION. W. M. Stickney, 203-210.
- Great Britain, coöperative societies in, 233, 235.
- Groceries: Expensive distributing method of, 77; reorganization in methods of distributing, 82.
- GROCERIES, THE COST OF DISTRIBUTING. E. M. Patterson, 74-82.
- Grocers: Contest of independent, with jobbers, 77; gross profits of, 75; pressure brought to bear upon, 77.
- Grocery business: Method of carrying on, 76; organization of, 79; profit in, 75.
- Hamburg, market-hall in, 160.
- Hamper: Adoption of, 170; advantages through use of, 169; growth in shipments by, 169; origin of, 168; price of, 168.
- HAMPER, THE LONG ISLAND HOME. H. B. Fullerton, 166-170.
- Haulage, cost of primary, 21.
- HOLMES, GEORGE K. Prevention of Waste and Seasonal Price Fluctuations Through Refrigeration. 48-56.
- HORNE, FRANK A. Some Aspects of Food Conservation by Refrigeration, 44-47.
- Housewives, national organization of, 84.

- Hucksters: Attitude of, toward municipal markets, 147; necessity of watching, 87.
- Illinois: Coöperative grain companies in, 205; coöperative incorporation law in, 203.
- Illinois Grain Dealers' Association, the, 204.
- Incomes, distribution of labor, on farms, 179, 181.
- Indiana, coöperative incorporation law in, 203.
- Indianapolis market: 139-152; charges for stands in, 131; nature of, 131; net profit to the city through, 131.
- INDIANAPOLIS MARKET, THE. Annis Burk, 131.
- Instruction trains, provision for, by railroads, 39.
- INTERSTATE RAILROAD, THE PLACE OF THE, IN REDUCING FOOD DISTRIBUTION COSTS. Ivy L. Lee, 10-19.
- Iowa, coöperative elevator companies in, 206.
- Grain Dealers' Association, 206.
- Jobbers: Abuses practiced by, 25; competition among, 61, 62; definition of, 58; displacement of commission merchant by, 60; effect of direct shipments upon, 68; elimination of, 198; function of, 70, 71; introduction of, 59; loans secured by, 65; placing of goods in cold storage by, 65; refrigeration and, 64; selling activity of, 61; sorting and repacking of produce by, 62; storing of surplus stock by, 68; task of, in disposing of surplus stock, 62.
- JOBBER AND COMMISSION MEN, RELATION OF, TO THE HANDLING OF PRODUCE. C. W. Thompson, 57-68.
- KAMP, CHARLES. Municipal Markets in Cleveland, 128-130.
- Kansas: Aid to direct shipments in, 67; coöperative farmer elevator companies in, 207.
- KING, CLYDE LYNDON, Municipal Markets, 102-117.
- Some Typical American Markets, A Symposium, 118.
- Labor-saving machinery, extensive use of, 183.
- Lamb club: Effect of, on farmer's profits, 221; in Tennessee, 218; organization of, 219.
- Lambs, investigation into supply of marketable, 217.
- LANE, F. VAN Z. City Planning and Distribution Costs, 240-246.
- LEE, IVY L. The Place of the Interstate Railroad in Reducing Food Distribution Costs, 10-19.
- Leipzig, market-hall in, 160.
- LEVIN, Stadtrat D. Wholesale Terminal Markets in Germany and Their Effect on Food Costs and Conservation, 153-165.
- LIBBIN, THOMAS J. Constructive Program for Reduction of Cost of Food Distribution in Large Cities, 247-251.
- LIPPINCOTT, ACHSAH. Municipal Markets in Philadelphia, 134-136.
- Local marketing, possibilities for, 102.
- Long Island Railroad, experimental farms of, 17.
- Long-time loans, necessity for, 188.
- Maltbie, Milo R., on cost of living, 240.
- Manufacturers: Direct purchase from, and selling by, 80; fixing of retail prices by, 80, 81, 82.
- Market, definition of car-lot, 1.
- bureau, necessity for, 117.
- halls, necessity of, in Germany, 156.
- master, in Cleveland markets, 129; in Rochester market, 137.

- Market news service, functions of, 259.
— superintendent, efficiency of city's 117.
- MARKET, THE INDIANAPOLIS. Annis Burk, 131.
- MARKET, THE ROCHESTER PUBLIC. E. W. Merrill, 137-138.
- Marketing; Appropriation for information concerning, 252; by telephone, 227; increased radius of, 111; of agricultural products, 232; organizations, study of existing, 255; possibilities for local, 102, problems in, 1.
- Markets: Adaptation of, to modern customs, 104; adaptation of to movements of population, 109; as forwarding centers in Germany, 155; as storage places, in Germany, 156; attitude of commission merchants toward retail, 147; centralization of, and price fixing, 162; conditions of, in various German cities, 159; development of larger, 256; expenditures of cities for, 104; influence of, on prices, 162; legal obstruction to farmers use of, in Pennsylvania, 111; legal regulation of, in Germany, 154; open-air, 112, 113; producers in, 163; producers as stall renters in, 170, results secured by, 116, 117. *See also* Municipal Markets.
- MARKETS, A QUESTIONNAIRE ON. John W. Farley, 139-152.
- MARKETS, BALTIMORE'S. James F. Thrift and William T. Childs, 119-127.
- MARKETS, SOME TYPICAL AMERICAN—A SYMPOSIUM. Clyde Lyndon King, 118.
- MARKETS, WHOLESALE TERMINAL, IN GERMANY AND THEIR EFFECT ON FOOD COSTS AND CONSERVATION. Stadtrat D. Levin, 153-165.
- MARQUIS, J. CLYDE. Advertising as an Aid to Direct Selling, 197-202.
- Massachusetts: Commission on cold storage, 46; provision for city planning boards in, 242.
- Measures, *see* Weights and Measures.
- Memphis, establishment of municipal markets in, 139.
- MERRILL, E. W. The Rochester Public Market, 137-138.
- Middlemen: Abuses by, 256; elimination of 26, 37, 232, 256; function of, 20, 25, honesty of, 223; in Germany, 155; multiplicity of, 223, 256; necessity for, 38; necessity for, at primary markets, 68; services of, 66.
- Milwaukee, curbstome market in, 133.
— market: Effect of, on prices, 133; farmers in, 132; income from, 132; plans as to policy of, 133; stall rentals in, 132; supervision of, 133.
- MILWAUKEE MUNICIPAL MARKET, THE. Leo Tiefenthaler, 132-133.
- Minneapolis, establishment of municipal markets in, 237.
- Minnesota: Coöperative farmer elevator companies in, 207; regulation of commission business in, 68.
- Misbranding: Baltimore regulation in regard to, 122; prevention of, in municipal markets, 115.
- MONMOUTH COUNTY FARMERS' EXCHANGE, THE. Joseph H. Willits, 211-215.
- Monmouth County Farmers' Exchange: Agents appointed by, 212; annual business of, 214; formation of, 211; present method of distribution through, 213.
- Montreal, curbstome markets in, 112; municipal markets in, *see* Questionnaire on Markets, 139-152.
- Motor boats, as agents of local distribution, 135.
- Motor trucks: Advantages of, 24, 26; and reduction of retail prices, 26; as agents of local distribution, 135;

- as cheaper medium of transportation, 30; competition of, with railroads, 31; displacement of horse by, 62; displacement of railroad by, 33; economy resulting from, 22; effect of, on retail prices, 26; increased investment necessary in use of, 33; increased speed of, 32; lowering of consumers' prices through use of, 28; national welfare and use of, 28; number of 36; possibilities of, 22, 30; possibilities of development of farm land and, 29; substitution of, for draft animals, 20.
- MOTOR TRUCK AS AN AGENCY IN DIRECT MARKETING, THE.** Stanley Albin Phillips, 20-34.
- Munich, market-hall in, 160; marketing facilities in, 103.
- MUNICIPAL MARKET, THE MILWAUKEE.** Leo Tiefenthaler, 132-133.
- Municipal markets: Adaptation of retail, to modern conditions, 110; attitude of consumers toward, 145; attitude of grocers toward, 148; attitude of producers toward, 149; cold storage plant in connection with 149; consumer's viewpoint regarding, 149; control of, 141; cost of living and 146; cost of operation of, 141; criticisms regarding, 148; direct routing and, 103; effect of, 249; economies in food distribution through, 107; effect of, on prices, 145; effect of, on production, 151; enforcement of honest weights and measures in, 115; establishment of, in Memphis, 139; establishment of, in Minneapolis, 237; fixing of stall rents in, 113; freight depots at 135; goods sold in, 116; in the United States, 104, 105; inspection of articles offered for sale in, 144; necessity of adequate facilities in, 114; possibilities of, 227; professional retailers as stall renters in, 110; receipts from, in Philadelphia, 135; results secured by, 116, 118; regulation and supervision of, 105; regulation of peddlers in, 114; scarcity of wholesale terminal, 105; sources of revenue for support of, 141; use of, by consumers, 145; use of, by producers, 110, 145. *See also* Markets.
- MUNICIPAL MARKETS.** Clyde Lyndon King, 102-117.
- MUNICIPAL MARKETS IN CLEVELAND.** Charles Kamp, 128-130.
- MUNICIPAL MARKETS IN PHILADELPHIA.** Achsah Lippincott, 134-136.
- Nebraska, coöperative farmer elevator companies in, 207.
- New Jersey: Attitude of, toward price cutting, 78; crusade against use of liquid measures in, 92; improved methods of selling milk in, 91; reforms in methods of selling butter in, 90.
- New Orleans, municipal market in 139-152.
- New York: Annual saving through standardization of weights and measures in, 101; coöperative incorporation law in, 203; law of, regarding package goods, 99; regulation of commission business in, 68; sale of produce at freight terminal of, 2; standardization of fruit containers in, 97;
- City: Department of food supply in, 250; investigations of food distribution in, 247; municipal market in, 249.
- NOLEN, JOHN.** City Planning and Distribution Costs, 240-246.
- Norfolk, municipal markets in, *see* Questionnaire on Markets, 139-152.
- North Dakota, coöperative farmer elevator companies in, 207.

- Office of Farm Management, investigations by, 175.
- Office of Markets, establishment of, 252; market news service and, 258.
- OFFICE OF MARKETS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE, THE. Charles J. Brand, 252-259.
- Ohio, road improvement in, 35.
- Oklahoma, survey of cotton conditions in, 253.
- City, effect of curbstone markets in, 113.
- Output: Adaptation of, to demand, 103; adjustment of, to demand, 18, 23.
- Package goods: Displacement of bulk goods by, 86; New York law regarding, 99.
- Parcel post: Effect of, on direct shipments, 67; growth in use of, 198.
- "Passing reports," advantages of, 7.
- PATTERSON, E. M. The Cost of Distributing Groceries, 74-82.
- Peddlers: Decrease in business of, 63, 64; regulation of, in municipal markets, 114.
- Pennsylvania Railroad: Cars of truck products hauled over, 14; experimental farming station of, 17; perishable freight carried by, 15.
- Perishable freight, schedules for, 16.
- Philadelphia: Market system of, 134; retail grocery stores in, 76; retailers' associations in, 80; sale by producers in, 110; solving of problems of distribution in, 134, 135; two municipal markets in, 135.
- PHILADELPHIA, MUNICIPAL MARKETS IN. Achsah Lippincott, 134-136.
- PHILLIPS, STANLEY ALBIN. The Motor Truck as an Agency in Direct Marketing, 20-34.
- Population: Agricultural production and increased, 183; concentration of, in cities, 153; movement of, from country to city, 255.
- Poultry, in cold storage, 50.
- Preference freight: Methods for handling, 16; provision for, 15.
- PRICE, HOMER C. Effect of Farm Credits on Increasing Agricultural Production and Farm Efficiency, 183-190.
- Price cutting: Attitude of New Jersey toward, 78; coöperative stores and, 225; disadvantages of, 81.
- Prices: Attack upon quantity, 80; centralization of market and fixing of, 162; destruction of food and high, 257; effect of Baltimore markets upon, 125; effect of Milwaukee market upon, 133; effect of municipal markets on, 145; effect of, on jobber, 60; equilization of, 55; fixing of, by manufacturers, 78; fixing of retail, by manufacturers, 80; increase of, 86; increase of consumers' over producers, 25; influence of markets upon, 162; regulation of, and protection of market goods, 165; regulation of, by supply and demand, 157; reports on wholesale and retail, 105; variations in, 153.
- Produce: Preparation of, for trade, 62; sorting and repacking of, 62.
- PRODUCE, RELATION OF JOBBERS AND COMMISSION MEN TO THE HANDLING OF. C. W. Thompson, 57-68.
- PRODUCE, WHAT FARMERS CAN DO TO FACILITATE TRANSPORTATION AND MARKETING OF. F. R. Stevens, 37-43.
- Produce district, location of, 3.
- Producers: As sellers, in Germany, 155; attitude of, toward municipal markets, 149; direct dealings of, with consumers, 256; economic status of, 22; effect of auction department upon, 106; organization of, 68; profits to, through coöperative grain companies, 205; separation of, from wholesalers, 157; use of municipal markets by, 110, 145.

- Production, seasonal variation in, 63.
- Products, specialization in cultivation of, 155.
- Profits: Impressions regarding farm, 175; received by farm tenants, 179.
- PUBLIC HIGHWAYS, IMPROVED. James M. Cox, 35-36.
- Public opinion, effect of, on honest weights and measures, 89.
- Publicity: Advantages of, 85; importance of, 83; use of, by consumers, 83.
- PUBLICITY AS A PREVENTIVE OF ABUSES BY THE RETAILER. Martha J. Fuller, 83-85.
- Quantity prices, attack upon, 80.
- Raiffeisen system, in Germany, 190.
- Railroad facilities, necessity of, 156.
— yards, as distribution points, 245.
- Railroads: Appointment of transportation specialist by, to further distribution, 258; competition of, with motor truck, 20, 31; displacement of, by motor truck, 33; encouragement of improved farming methods by, 17; representatives of, as investigators in producing regions, 14; work of, in production and distribution, 258.
- Refrigeration: Application of, to goods in transit, 66; car-lot shipments and, 6; improvements in, 64; jobbing business and, 64; modern methods of, 14.
- REFRIGERATION, SOME ASPECTS OF FOOD CONSERVATION BY. Frank A. Horne, 44-47.
- REICHMANN, FRITZ. Savings Through Proper Supervision of Weights, Measures and Standards, 94-101.
- Retail grocers: Associations of independent, 79; position of, 74.
— prices: Lowering of, 80; motor truck and reduction of, 26; reduction of, 26.
- Retail stores: Competition among, 75; management of, 248.
— selling, outside market-halls, Germany, 158.
- Retailers: Abuses by professional, in markets, 111; professional, in Baltimore markets, 122; professional, in Cleveland markets, 129; renting of stalls by professional, 110; responsibility of, for cost of living, 84; wholesale buying by, 249.
- RETAILER, PUBLICITY AS A PREVENTION OF ABUSES BY THE. Martha J. Fuller, 83-85.
- Retailers' associations, in Philadelphia, 80.
- Right Relationship League, the, 233.
- Roads: As agent of local distribution, 135; building of, by convicts, in Ohio, 35; distribution of food, and 115; improvement of, 39; maintenance of good, 245; necessity for good, 192.
- ROBERTS, ISAAC. Farm Credits Through Farmers' Loan Associations, 191-196.
- Rochester: Municipal markets in 139-152; farmers in, 137; market master in, 137; nature of, 137; segregation of venders in curbstone market of, 112.
- ROCHESTER PUBLIC MARKET, THE. E. W. Merrill, 137-138.
- Roosevelt, Theodore, on coöperative associations, 210.
- Rural credit: Importance of increased, 190; in Europe, 184; system, provisions of, 189.
- San Antonio, municipal market in, 139-152.
- Scientific farming, added interest in, 18.
- Seattle, municipal markets in, 139-152.
- Selling at home: Distribution costs and, 103; facilities for, 103; necessity for, 102.

- Sherman Anti-Trust Law, interpretation of, 81.
- Short-time loans, necessity for, 186.
- South Carolina, aid to direct shipments, in, 67.
- South Dakota, farmer coöperative elevator companies in, 207.
- Spillman, W. J., on farmers' accounts, 176.
- SPRACKLAND, HARRY. The Combination Family Basket, 171-174.
- Stall rents: Fixing of, 104; in Baltimore, 119; in European cities, 113; in Germany, 154; in municipal markets, 109, 110, 113.
- Standardization: Advantages of, 96; lack of, in some articles, 74; of farm products, 232; official specifications for, 95.
- Standards: Classes of, 95; establishment of, 94; multiplicity of 253; necessity of, 202, 253; study and promulgation of market grades and, 253, 254.
- Star Union Line, as pioneer fast freight organization, 15.
- STEVENS, F. R. What Farmers can do to Facilitate the Transportation and Marketing of Produce, 37-43.
- STICKNEY, W. M. The Consumer's Coöperative Movement in Chicago, 223-228.
- Grain Growers Reduce Cost of Distribution, 203-210.
- Storage rooms, importance of, 165.
- Storage warehouses, advantages of, 41, 42; erection of, 40.
- Street traffic, regulation of, 244.
- Surplus stock, outlet for, 63.
- Taylor, Henry C., on standardization of farm products, 232.
- Telephone: Consumers' use of, 86; marketing by, 227.
- Tenant farmers, capital, receipts, expenses and incomes of, 180.
- Terminal facilities, inadequate, in New York City, 248.
- wholesale markets: In Europe, 105; necessity for, 104; objects of, 105; transportation and distribution and distribution facilities of, 114.
- THOMPSON, C. W. Relation of Jobbers and Commission Men to the Handling of Produce, 57-68.
- THOMSON, E. H. Profits that Farmers Receive, 175-182.
- THRIFT, JAMES F. Baltimore's Markets, 119-127.
- TIEFENTHALER, LEO. The Milwaukee Municipal Market, 132-133.
- TOUSLEY, E. M. What Coöperative Societies may accomplish in Lowering Food Distribution Costs, 229-239.
- Trade: Agreements in restraint of, 81; segregation of, in curbstone markets, 112.
- Trading stamps: Necessity for, 75; prohibition of, 130.
- Transfer yards, and fast freight service, 17.
- Transit, selling in, 7, 8, 12.
- Transportation: Adaptation of, to market conditions, 19; necessity for quick, 11; of farm products, 38; problem of, 26.
- Trolley freight, as agent of local distribution, 135.
- terminals, and direct buying, 114.
- Urban population, increase in, 102.
- URNER, FRANK G. Wholesale City Distribution of Farm Products, 69-73; *see also* 48.
- Vegetables, lengthened season for perishable, 5.
- WALDRON, WILLIAM L. Effect of the New Jersey Department of Weights and Measures on the Cost of Living 86-93.

- Washington, coöperative incorporation law in, 203.
- WASTE, AND SEASONAL PRICE FLUCTUATIONS, PREVENTION OF, THROUGH REFRIGERATION. George K. Holmes, 48-56.
- Waterfront terminal market, in Philadelphia, 135.
- Weights and measures: Amount saved through standardized, 101; Baltimore's regulations in regard to, 122; department of, in New Jersey, 92; establishment of state supervision of, 99; honesty in, 105; in Cleveland markets, 128; inspection of 98; municipal inspection of, 108; necessity of honest, 15; use of short, by hucksters, 84, 88.
- WEIGHTS AND MEASURES, EFFECT OF THE NEW JERSEY DEPARTMENT OF, ON THE COST OF LIVING. William L. Waldron, 86-93.
- WEIGHTS, MEASURES AND STANDARDS, SAVINGS THROUGH PROPER SUPERVISION OF. Fritz Reichmann, 94-101.
- Wharves, as distribution points, 245.
- Wholesale business, development of, 155.
- distributing agency, necessity for, 72.
- markets: Administration of, 107; provision for auction department in, 106.
- terminal markets: Bulletins issued by, 109; inspection of weights and measures in, 108.
- WHOLESALE TERMINAL MARKETS IN GERMANY AND THEIR EFFECT ON FOOD COSTS AND CONSERVATION. Stadtrat D. Levin, 153-165.
- Wholesalers: Elimination of, 79; separation of, from producers, in markets, 157.
- Wholesaling, systems of, 234.
- WILLITS, JOSEPH H. The Monmouth County Farmers' Exchange, 211-215.
- Wisconsin, law of, regarding coöperation, 203.

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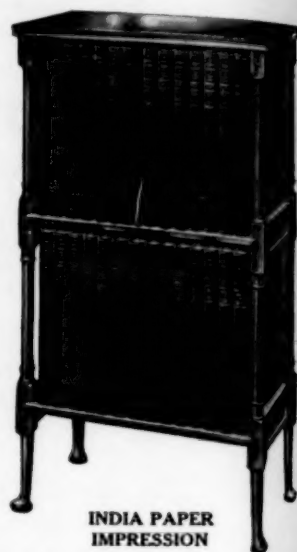
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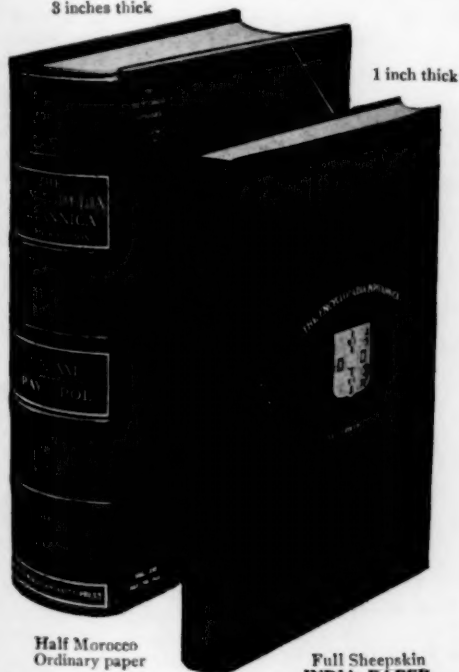
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